

AMERICAN ARTISAN and Hardware Record

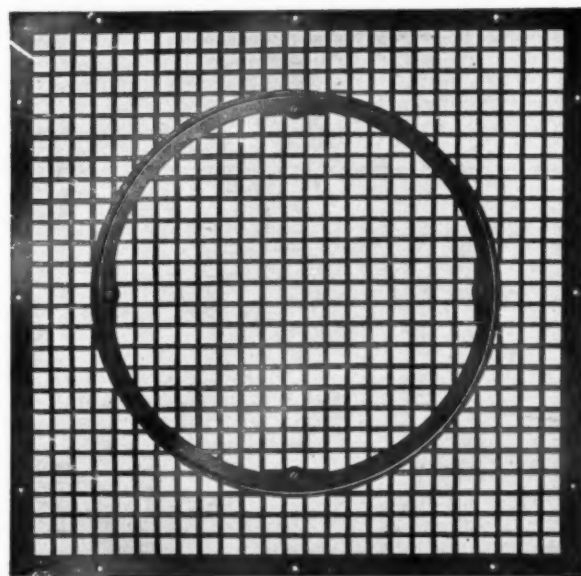
Vol. 80. No. 9.

620 SOUTH MICHIGAN AVENUE, CHICAGO, AUGUST 28, 1920.

\$2.00 Per Year.

WALWORTH DOUBLE GRATING *for* PIPELESS FURNACES

*Plain
Lattice
Design*



*Neat
Strong
Durable*

The Kind Most Dealers Are Using This Season

Here's a double grating that fills all requirements. It is made in seven standard sizes from 22x24 to 45x45.

It has square cold air return, round center for warm air supply.

We carry a complete stock at all times and are able to fill orders for any quantity promptly.

Begin now to use **WALWORTH DOUBLE GRATINGS** on your Pipeless installations. Let us tell you more about them.

Write today for Catalog and Discount Sheet

WALWORTH RUN FOUNDRY COMPANY

W. 27th St. and N. Y. C. & St. L. R. R.
CLEVELAND, OHIO

"QUICK COMFORT" OIL HEATERS *are ready for shipment now*

If you have not placed your order for fall delivery do so at once



"QUICK COMFORT" OIL HEATERS

have reinforced fount bottoms, use extra heavy wicks which cannot stick and the two piece smokeless device insures an extremely hot flame.

For more particulars write to

QUICK MEAL STOVE CO.
DIVISION of AMERICAN STOVE CO.
825 Chouteau Ave. ST. LOUIS



MAHONING HEATING SYSTEMS

"One Thousand Furnaces is a pretty good sales record"

One of our dealers before the end of this year, will have sold 1000 Mahoning Furnaces in a single city territory. Not bad, you'll say, for one dealer. And the big part of it is this dealer wouldn't sell his Mahoning Agency for the profits on a good many thousand furnaces.

Good Territory Still Open

The Mahoning is the furnace that is sold from coast to coast. We still have some mighty good territory open for progressive dealers.



A letter will secure our literature and complete agency details.

The Mahoning Foundry Co.
622 Poland Ave., Youngstown, Ohio

We maintain Eastern and Western warehouses for the convenience of the trade.



WRIGHT PIPELESS HEATERS

ESTABLISHED 1880

Representative of
The Hardware, Stove,
Sheet Metal, and Warm
Air Heating and Venti-
lating Interests

AMERICAN ARTISAN and Hardware Record

Address all communications and
remittances to

AMERICAN ARTISAN
AND
HARDWARE RECORD
620 South Michigan Avenue
Chicago, Illinois

PUBLISHED EVERY SATURDAY BY ESTATE OF DANIEL STERN

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID \$2.00
FOREIGN COUNTRIES ONE YEAR POSTAGE PAID \$4.00 CANADA ONE YEAR POSTAGE PAID \$3.00

Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago, Illinois under Act of March 3rd 1879

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CHICAGO, AUGUST 28, 1920.

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For those who are inclined to take a discouraging view of the business outlook, there is reassurance in the twenty-fourth annual review of industrial conditions issued by the Continental and Commercial Bank of Chicago. The report indicates that business men all over the country show a strong feeling of confidence and are optimistic as to the future.

Confidence Is General

This general conclusion, based on hundreds of reports from manufacturers, jobbers, retailers and producers of raw materials, is apparently at variance with some conclusions drawn from sources less comprehensive, but it must stand as final at this time because it is based on facts carefully gathered and analyzed.

Moreover, the facts collected from many sources and marking the conditions in more than 40 states are in accord with the opinions expressed in the comment that accompanied many of the reports.

No one of the hundreds of men making reports could know the effect his particular report would have on the tabulation. The conclusion is, therefore, drawn from a recital of conditions as they actually exist.

A great majority of the reporting concerns say that orders for goods are large and the prices are good except in a few lines, notably textiles. A strong demand for all sorts of commodities is thus definitely assured.

Only one-fourth of the reporting concerns state that there is any accumulation of goods and they have found no particular tendency on the part of the consumer to curtail purchases.

With a strong demand for all sorts of commodities, business men find reason for confidence in the near future.

The demand factor, however, is only one side of the problem. On the supply side the

picture is more favorable than might be supposed with the railroad congestion definitely and decidedly affecting all business activity adversely.

In regard to the railroads, it is fair to expect an easier situation since the recent wage and rate decisions, although the average of the influence of transportation difficulties on business is rated as something worse than bad.

If there are gray spots on a generally bright report, coal is a black spot. There is evidence that most coal consumers have enough to prevent suspension of operations, but have no surpluses.

The question of coal supply will be of all but vital importance for many months. If there are no further troubles with labor in the coal fields, the situation will clear only as the transportation problems clear and will improve as transportation improves.

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Opportunity has just been connecting your door bell with the city current. You don't need to rely upon the little dry cells that used to get out of order so fast. In other words, women suffrage is practically an accomplished fact in every state in the Union. What's the connection? A very close one. National women suffrage means much more than giving the vote to women. It is the beginning of vast and profound changes in their domestic psychology.

One of the results which is sure to follow is a revolt against household drudgery. With a deepening sense of citizenship, women will begin to demand the advantages of economic as well as political equality. Everywhere men have labor-saving devices in their offices, stores, shops, factories, and farms.

In a way it is really part of their citizenship—the consequence of the political ad-

Votes for Women and Big Profit

vancement which always carries in its wake economic progress. Women will seek like privileges and helps in their work.

Washing machines and vacuum cleaners and other labor-saving devices will of necessity be in more general demand as the outcome of the new psychology created by equal franchise.

Hence, the time is ripe for the alert hardware dealer to plan his selling campaign with a view to exploiting to the utmost the changing mental attitude of the great majority of buyers who dictate the purchases for the home.

The retailer who is wise will henceforth give prominence to domestic labor-saving appliances. In this direction lie immense profits.

♦ ♦ ♦ ♦ ♦

Most cancellations of orders are largely due either directly or indirectly to chaotic conditions arising from war

Sacredness of Contract times, according to a report on a survey of the manufacturing field made by the Chamber of Commerce of the United States. The percentage reporting that customers have cancelled orders because of failure to recognize the sacredness of contract, and the legal force and responsibility of an order received and accepted in good faith was comparatively small.

There is danger however, the report declares, that unless a definite stand is taken against any tendency to regard cancellation of orders as unimportant, and unless there is cultivation of a general feeling that an order is to be considered more than a mere memorandum, this evil may assume serious proportions.

The investigation of cancellations was made by the Fabricated Production Department of the National Chamber in response to complaints from members that production was being interfered with, so much so, that plants having had sufficient orders to run for months, were curtailing their efforts or shutting down even though production of their product is below normal and stocks in the hands of wholesalers and retailers are light. The complaints protested that the sacredness of the sale contract was being disregarded and that the buyer was willing to chance its legal enforcement.

To get at the bottom of the problem, in-

quiry was sent to 106 leading trade associations to learn the situation.

Some of the questions were: Is your industry being affected at this time by the so-called cancellation evil and to what extent? State most common reason given for cancellation. Have your members in times of large production in securing orders, inserted cancellation clauses in order or contract?

In analyzing replies it was found that the responsibility for many cancellations was chargeable in part to the seller as well as to the buyer. Some of the chief reasons for cancellations are as follows: Inability to make prompt delivery; over stock; business declining; revision of production schedule; financial embarrassment. Some replies indicated also that the public will not buy at present prices.

Cancellations are not confined to this country as is shown by a report from Nottingham, England, that British lace and hosiery manufacturers and exporters have become concerned over the large number of orders cancelled by foreign firms. The Nottingham Lace Exporters' Association, which represents the lace export trade of the country, recently decided that no member of the association should hereafter accept any cancellation of orders without the special permission of a committee appointed for the purpose of investigation.

This means, according to Consul Calvin M. Hitch, that should a customer decline to accept goods, after having placed an order, he will not be permitted to purchase goods from any other member of the association until he has complied with his contracts. The hosiery trade is considering similar action. There is no disposition here to imitate these English methods but it is believed that the time is opportune to emphasize and stabilize trade ethics which make for fundamental soundness in business.

♦ ♦ ♦ ♦ ♦

Ford owners, as a rule, do most of the work on their cars. Despite the cheap vaudeville jokes to the contrary, **Ford Owners and Enamels** they are no different from the rest of us. They like to keep their cars looking neat and shining. Here is the big opportunity for the hardware dealer to sell them automobile enamels.

Random Notes and Sketches

By Sidney Arnold

To show me how easy my work is, the subjoined clipping was forwarded to me by my friend, Frank Baackes, Vice-President American Steel and Wire Company, Chicago, Illinois.

Most any man can be an editor. All the editor has to do is to sit at a desk six days a week, four weeks a month, and twelve months in a year, and edit such stuff as this:

"Mrs. Jones, of Cactus Creek, let a can-opener slip last week and cut herself in the pantry. Joe Doe climbed on the roof of his house last week looking for a leak and fell, landing on his back porch. While Harold Green was escorting Miss Violet Wise from the church social last Saturday night a savage dog attacked them and bit Mr. Green on the public square. Mr. Frang, while harnessing a broncho last Saturday, was kicked just south of his corn crib."

* * *

Always be sure that you know what you are talking about when giving advice, counsels my friend, Herman E. Gnadt, hardware dealer of Chicago, Illinois.



To indicate how one may go wrong in the matter, he narrates this veracious tale:

The minister was giving the newly married couple some excellent advice for their guidance in matrimonial life.

"Pay attention to me," he said. "You must never get cross with one

another. Always try to do everything in such a way that there is no unpleasantness for either of you. It is the husband's duty to protect his wife, and a wife must always obey her husband, and follow him in the walks of life—"

"But, sir," interrupted the young wife.

"I have not finished," said the minister. "She must always—"

"But, please, sir," broke in the young woman once more in desperation, "can't you alter that last part—about the walks of life? My Joe is a country post-man."

* * *

You will smile when you read this clipping, forwarded to me by my friend Paul L. Biersach of Milwaukee, President Master Sheet Metal Contractors' Association of Wisconsin:

"My ideal husband," said the girl who had been reading cheap novels, "must be a strong, silent man, full of grit, and able to bear the heat and burden of the day without flinching—one who will not hear a word said about me, and who will not utter an unkind word himself."

"What you want is a deaf-and-dumb coal-heaver," murmured her friend.

* * *

Always we must be on our guard against blunders throughout life, says my friend, John P. McCrea.

This brief dialogue is an instance of what he means:

Blinks: The undercrust to that chicken pie you brought me was abominably tough.

Waiter: There wasn't any undercrust to that pie, sir, it was served on a paper plate.

* * *

I freely make acknowledgment to my friend, N. A. Gladding of E. C. Atkins and Company, Indianapolis, Indiana for this anecdote:

Two young men supposed to be busily employed in a hardware store while the proprietor was out were recently startled by the appearance of their employer while they were engrossed in a game of cards.

The proprietor was indignant, "How is it" he demanded, "I scarcely ever find you fellows at work when I come in."

"Well sir, I'll tell you," volunteered one of the clerks. "It's on account of those rubber heels you wear."

* * *

If you happen to be frowning right now, here's something to iron out that unbecoming wrinkle between your eyes. It is furnished by my friend, R. E. Walker, of the Meyer Furnace Company, Peoria, Illinois.

An Irishman returning from a trip to the old country, being met by friends, was asked how he enjoyed his trip, etc., and what kind of traveling companions he had on the steamer.

He replied that he had enjoyed his trip very much, but as for traveling companions—well—"One was a Scotchman and the other fellow did not buy anything, either."

* * *

Telephone calls get mixed in Providence, Rhode Island, just as they do in other places, according to my friend, Wallace L. Pond of the Nicholson File Company, Providence, Rhode Island.

Not infrequently when Judge Smith in the governor's office at the statehouse is called to the phone, somebody asks, "Is this the waterworks?"

Once during the winter of 1917 an excited individual, who was contending with a broken water pipe, shouted into the judge's ear the well known question:

"Is this the waterworks?"

The legislature was in session at the time.

"No, sir, this is not the waterworks," the judge replied. "This is the wind works."

* * *

Here are some verses which have been going the rounds of the press. Originally, as far as I can learn, they appeared in *Sales Sense*. They accentuate an aspect of life and business which can not receive too much emphasis nowadays:

The Fellow That's Willing to Work.

He goes to his task with a song and a smile.
He never says "maybe" or "after a while."
The fellow that's willing to work.

But he lives in the sunshine that gladdens today
And lightens each load in his good-natured way,
The fellow that's willing to work.

He isn't afraid of the trusts that expand,
He doesn't look forward to woe in the land,
The fellow that's willing to work.

For he knows that the earth will give food, drink and air,
And there's always enough and a little to spare
For the fellow that's willing to work.

Up-to-the-Minute News Siftings

*Items of Interest to Dealers Gleaned from Many Fields.
National and Local Business Plans, Problems, and Practices.*

BETTER BUSINESS BUREAUS PROMOTE PROSPERITY

A higher standard of business practices, with an unmistakable spirit of honesty prevailing in all forms of advertising, characterizes every city in the United States in which a Better Business Bureau of an advertising club is found in operation, declares William P. Green, Associated Advertising Clubs, New York City.

These business bureaus, supported by the local advertising club, and supervised by the Vigilance Committee of the national association, investigate and bring about the discontinuance of dishonest representation of every business organization in their district.

A review of the accomplishments of a few of the Middle-West bureaus for a brief period is given by Mr. Green as an example of ways in which these organizations improve business conditions.

A Minneapolis, Minnesota, concern, advertising building material "at a great sacrifice," claimed that they were Government salvage. The Better Business Bureau of that city found upon investigation that some of the materials had not been purchased from the Government. The advertiser was informed of the misleading idea he was giving his customers and agreed to eliminate the objectionable feature.

An Iowa concern, advertising patent ventilating windows as the only ones that could be "opened or closed from the inside of the building," promised to discontinue making this statement when the Iowa Better Business Bureau proved to the manager that several other manufacturers made similar windows.

A middle-western roofing-paper company used the word "factories" in its trade name, although it neither owns nor operates a factory. Contending that the fraudulent use of this term made for unfair competition among those engaged in a similar business, the Better Business Bureau obtained the promise of the advertiser and his attorney to eliminate the word "factories" from its trade name.

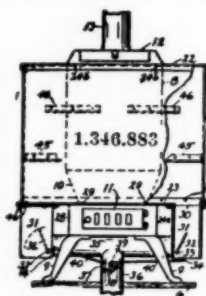
The files of the Associated Advertising Clubs, New York City, embrace almost countless cases like these, in all lines of business, which have been growing in number ever since the vigilance work began.

At the annual convention of the Associated Advertising Clubs, at Indianapolis, Indiana, June 6 to 10, much attention was given the subject of making the truth attractive. Whenever exaggeration does occur in advertising, the association has found, it is usually due to the fact that the advertiser takes this means for covering up his inability to prepare attractive advertising copy.

Don't judge the purse by the clothes.

Secures Patent Rights for Stove Attachments.

Salvador H. Frederick, of St. Paul, Minnesota, has obtained United States patent rights, under number 1,346,883, for a stove attachment described herewith:

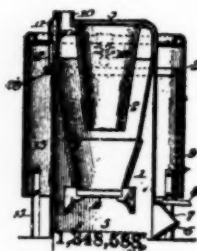


The combination with a heating stove, of a jacket spaced about the stove and having a perforated top, and a bottom fitting about the stove close by the base thereof, said bottom having two apertures each with a tube depending below it outside the base of the stove and provided each with a valve, a T-shaped

pipe having its arms connected one with each of said tubes and its leg extended down through the floor and arranged to receive fresh air, a valve in said leg above the floor, and operative connection between said valve and the valves in the tubes, whereby the latter valves will close or open automatically in reverse order to the closing and opening of the valve in the leg.

Assigns United States Patent Rights for Stoves.

Under number 1,348,588, United States patent rights have been granted to Erwin W. Seeger, Milwaukee, Wisconsin, assignor to Seeger Manufacturing Company, Chicago, Illinois, a Corporation of Illinois, for a stove described herewith:



A device of the character described comprising a fuel-burning stove having a grate, a shell surrounding said stove forming a clear channel between said shell and the outer wall of said stove extending substantially throughout the full vertical length of said stove.

Said channel is substantially fully open at the bottom and at the top thereby to afford an unobstructed passage for an air current upwardly through said channel thereby to heat the air current passing through said channel and cause circulation of the air in the compartment where said device is placed.

Regulating means are supplied for said stove, thermal means within the air current in said channel and responsive to the temperature of the air in said channel for controlling said regulating means, and means for adjusting the relationship between said thermal means and said regulating means, said thermal means including an air chamber substantially surrounding the stove and an expansible and retractable pneumatic device communicating with the chamber and adapted to actuate the regulator.

The Week's Hardware Record

*What Retailers, Jobbers, and Manufacturers Are Doing.
Latest Selling Methods. Experiences of Successful Men.*

STATES REASONS WHY RETAILERS SHOULD BE ORGANIZED

Excellent work is being done by the Fort Dodge Commercial Club, Fort Dodge, Iowa, in developing a fine community spirit between merchants and customers in that city and surrounding trade territory.

The Secretary of the Retailers' Bureau Department is N. H. Nielson. He is tireless and enthusiastic in promoting the welfare of the dealers, especially with reference to the benefits of membership in trade associations.

In the August edition of *The Community Builder*, published by the Fort Dodge Commercial Club, he gives convincing reasons why retailers should organize.

That we may have a more definite and clearer understanding of the subject, he writes, let us begin with an analysis of the average retail dealer in his own home town and consider his surroundings, his trials, tribulations, business conditions and usual ambitions.

With this examination we find that in almost every community the average retail dealer considers himself a servant of the public, that he is giving up the best years of his life to render service to the community, and especially in the smaller cities, he is led to cater to all of the whims and fancies of every customer who enters his place of business.

It has been his ambition to become a prosperous merchant, to be included among the leading business men of the town, to be known as a local philanthropist, a shining light in the community, and to attain that lofty and laudable ambition, hundreds of thousands of American business men have settled into an endless business rut, with a vision that does not extend beyond the corporation limits of his own city.

It is a narrow, monotonous existence; every day is like the day before, and the day following is like today.

Now the general public in this merchant's town do not stop to think or realize the full extent of the demands they are constantly making upon the retail merchant.

He is asked to donate and subscribe to everything, every day and every week, year after year, until he has become a legitimate and logical prey of the solicitors at all times and in all places, whatever the cause, worthy or unworthy, good, bad or indifferent—he is first victim always and the first man asked to head a subscription list.

No greater public benefactor exists in any communi-

ty than the retail merchant. His money is expected to shingle every church in town and for forty miles around; it is expected to buy the new organ for the Baptist church, the new carpet for the Methodist church, to paint the Congregational church, to build new steps for the Presbyterian church, to buy a new site for the Colored church, and to support all of the bazaars and entertainments liberally, as well as every charitable and benevolent institution and enterprise in town.

And so in the average smaller towns and cities of 5,000 to 50,000 population throughout this country, the trials and tribulations of the retail dealers are numerous and vexatious; his days are long and full of trouble, while his nights are dreams of unpaid bills and accounts uncollectible.

He goeth forth in the morning full of hope and expectations (and with some cash); he cometh home at night, plucked by the solicitor, swindled by the forger, robbed by the shop-lifter, abused by the customer and paralyzed by the traveling salesman.

Verily, in the average town the retailer is of few days and full of trouble, and now, by heck, he's a profiteer!

Someone said to these merchants several years ago that a Retail Merchants' Association in their town would stop those foolish practices and correct these abuses by the formation of rules and agreements, by bringing these retailers together in a friendly cooperation.

So a bunch of real live wire merchants got together and organized the Boomtown Business Men's Club. It lasted about six months, and died a lingering, painless death.

Brown accused Jones of wanting to run it; Jones said he'd be darned if Brown could dictate to him, and Smith said he was disgusted with both of 'em, while all the other merchants in the organization sat in the back row and just grinned.

And so they gave up the ghost, said it was no use, and they all went back to the old days of business jealousy, suspicion, distrust, animosity and antagonism, with its accompanying worry and annoyance and loss of real money.

Is it any wonder that bad laws were passed; is it any wonder that dangerous legislation so detrimental to the great retail business interests of this country is constantly being proposed by political tricksters in our legislatures and in our congress, when it is the common belief and understanding among the politicians that the retail merchants are always asleep at the switch, or in a comatose condition beyond any sense

It is worth while to keep in mind the fact that AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western hardware and metal prices corrected weekly. You will find these prices on pages 40 to 45 inclusive.

of danger and are easy marks?

What have you ever done in your home town to correct this condition?

What have you ever done to arouse your sleeping neighbors to a realization of the real dangers that are confronting them (and everybody else) through unjust and unfair legislation, both state and national, proposed and pending at this moment in our state and national capitols?

I know, and so do you know, that in every one of the hundred cities in Iowa in which reposes the remains of a defunct retail organization, there are merchants who know better, who know they are not doing their duty, not doing their share in the great work now being conducted in their own behalf, by their fellow business men.

In every one of those towns there are always a few leading merchants, the big merchants of the city, who are respected and looked up to as leaders in the community, whose advice and judgment is considered sound and good, and who have wide influence among the other business men in that town.

These few men in every town are broadminded, they are up-to-date, they visit larger cities, they are members of state associations which represent their lines, they attend the state convention once a year of the Shoe Dealers, the Clothing Dealers, the Furniture Dealers, the Hardware Dealers, and possibly the Dry Goods association, and while at these conventions they "whoop it up" strong for greater organizations, for more united effort.

They preach about the great necessity for combined activity, and then go home and view the remains of their dead local organization, weep a little over it, feel sorry for it, talk about it for a few days in subdued tones, and then forget all about it.

Patents Roller Skate Wheel.

United States patent rights have been obtained by Harry A. Hannum, Springfield, Massachusetts, assignor to Winchester Repeating Arms Company, New Haven, Connecticut, a Corporation, under number 1,347,777, for a roller skate wheel described herewith:

A ball-bearing roller-skate wheel of the inclosed type, the said wheel consisting in a hub, and two plates inwardly struck up to form ball-cups and secured together in spaced relation, whereby their oppositely located high points are kept out of contact to provide for correction after assemblance, for the prevention of wobbling.

Here Is Reason for Selling More Floor Paint.

Paint dealers are missing a grand chance to sell more floor paint.

Rugs, carpets, linoleum, oil cloths and all floor coverings are very high in price now.

It's a very common thing to see kitchen and oftentimes dining room and bath room floors bare.

These floors should be painted with floor paint.

It should be an easy matter for any paint distribu-

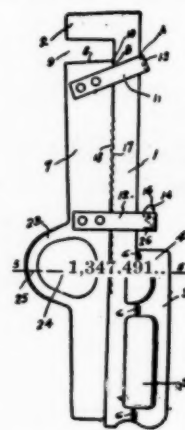
tor, by means of well directed newspaper advertisements, to double his trade in this specialty.

Every dealer knows the arguments in favor of painted floors.

Dealers, or at least a good many of them have simply overlooked the fact that psychological conditions now favor a campaign to increase sale of floor paints.

Gets United States Patent Rights for a Wrench.

Leon Benoit and Percival Faulkner King, Vancouver, British Columbia, Canada, has procured United States patent rights, under number 1,347,491, for a wrench described herewith:



with the first one.

A wrench comprising a shank having a rigid jaw, a second shank mounted on the edge of the first-mentioned one having its upper end adapted to form the sliding jaw for the wrench and rounded at one corner for rolling contact with said first shank, and an inclined strap secured to the second shank embracing the first one and bearing at its upper embracing edge on the rear edge of the first shank at a point in advance of the point of rolling contact of the second shank

Buys Land for New Factory.

The Republic Tool and Manufacturing Company has purchased a site on which it plans a plant to have an ultimate floor space of 150,000 square feet at Cleveland, Ohio.

Procures Patent Rights for a Jar Lifter.

Under number 1,348,059, United States patent rights has been granted to Albert Kenneth Sheppard, Port Moody, British Columbia, Canada, for a jar lifter described in the following:



A jar lifter comprising a handle including a rod, a frame slidably mounted upon said rod, a pair of clamping jaws pivotally mounted upon the lower end of said frame, a finger engaging element forming part of the frame, divergently disposed arms projecting from said rod, eyes formed on the adjacent ends of said jaws, and slidably fitted on said arms whereby said jaws are opened and closed by movement of said frame in opposite directions, and coiled springs interposed between said handle and finger engaging element and encircling said rod for the purpose specified.

Time was when misrepresentation, greed and dishonesty on the part of the retailer was answered by suspicion, cupidity and distrust on the part of the customer.

Good Ideas for Window Display

*Practical Lessons from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.
How to Get More Passers-By to Come into Your Store.*

WINDOW DISPLAY OF VARNISHES INCREASES SALES.

In practically every mercantile center of this continent the people are accustomed to look to the hardware store as a source of supply for paints and varnishes.

In the olden days there were very few separate

The window display under discussion attracted considerable notice by the novelty of its design.

The floor is covered with purple crêpe.

The background was draped with tapestry curtains against which the cutout of the lady holding a can of varnish in her hands is sharply accented.

It will be seen from a study of the picture that Mr. Kayser featured only a nationally advertised brand



Window Display of Varnishes, Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by J. C. Kayser, Simcoe, Ontario, Canada.

stores devoted entirely to the merchandizing of paints and painting supplies.

Of late years, however, owing to various causes, many hardware dealers have allowed this profitable business to slip out of their control.

By making use of the lesson taught by such window displays as that shown in the accompanying illustration, arranged by J. C. Kayser, Simcoe, Ontario, Canada, and awarded honorable mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, the hardware dealer can regain the lost paint and painting supplies trade of former days.

Beyond a question window advertising is one of the most effective means of gaining new customers and selling goods.

of varnishes and enamels with a trade-mark which is associated with high degree of quality.

This window display has plenty of white in it to give emphasis to the articles exhibited.

It is artistic and arrests attention.

The best proof its effectiveness is to be had in the report of Mr. Kayser that sales of the articles shown were greatly quickened during the time that the display was on exhibit.

Is Organized to Make Hardware.

Maurice A. Taylor, N. C. White, and P. Winter are the incorporators of the G. C. Winter Company, which has been chartered at Southbridge, Massachusetts, to make hardware and similar articles.

Members of the Hardware Club of Chicago and Their Families Have Gay Time at Annual Outing.

Intense Excitement Caused by Sensational Home Runs In Baseball Game. Lots of Fun for Everybody.

A million dollars' worth of sunshine and \$7,483,951.00 worth of fun and frolic were distributed among about two hundred persons at the annual outing of the Hardware Club of Chicago.

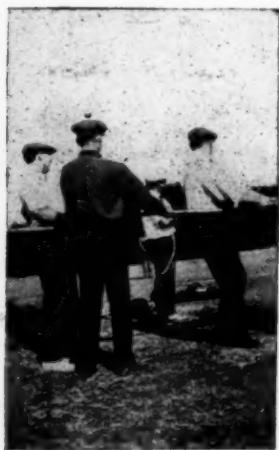
Some of the members of the Club were on the picnic grounds at Ravinia Park, Illinois, Tuesday, August 24, 1920, the date of the outing, an hour or two in advance of the main arrivals.

They went out to limber up for the great baseball contest.

By the time the majority of the folk got to the grounds, the first comers had worn the varnish off a dozen bats and wore holes in the tough cowhide of a dozen baseballs.

After a lengthy conference with our attorney, followed by a consultation with several constitutional lawyers, we are bold enough to say that the air of the picnic grounds was like wine.

We have a profound respect in



our official capacity for the eighteenth amendment.

We trust that none of our readers will misunderstand us, therefore, when we make the forthright statement that the day was as stimulating as the long-forgotten Manhattan cocktail.

The next president of the United States will make the most serious blunder of his administration if he does not appoint Allan Coleman, now president of the Hardware Club of Chicago, as Ambassador Plenipotentiary to the allied powers of Europe.

It was his supreme and masterful diplomacy which kept the people good natured—nay even smiling and contented while waiting for the truck load of savory viands intended for the noonday luncheon.

A rumor was spread among the hold-up men of Chicago that the eatables intended for Ravinia Park came out of the kitchen of the Hardware Club of Chicago.

It is reported on trustworthy authority that the

truck was compelled to make numerous detours in order to throw them off the track and preserve the succulent treasures intact for the eager and hungry throng who impatiently awaited their arrival.

Through the courtesy of George C. Brown, representing the Aladdin Industries, Incorporated, the coffee, tea, milk, and ice cream were delivered at the same temperatures they had when they left the kitchen of the Hardware Club in Chicago. He loaned for the occasion a dozen or more of the Aladdin Thermalware Jars.

Following the bountiful luncheon came the games



of the afternoon.

Keegan and Peterson won the first prize, namely, a food chopper each in the Quoits pitching.

W. D. Lewis and Allan J. Coleman took second honors. D. E. Cummings and C. Pipenhagen were third.

The one hundred yard dash was won by O. J. Shields. He was

closely followed by H. A. Dormeyer. Third in the race was F. Wood. The prizes were saw, hatchet, and hammer in the order named.

The fat men's race was better than any two dollar vaudeville between 44th and Broadway, New York City, and Adams Street, London.

Whoever said that fat men can not run gracefully is a slanderer and a scandalmonger and deserves to be driven beyond the tents, an Ishmael from the society of decent, self-respecting, plump folks.

It was a beautiful race—rhythmic, graceful, harmonious, and orderly. In fact, it was everything that a race should be with the single unimportant exception that it was not fast. H. C. Forster crossed the line first. After a respectable interval, W. K. Hamilton arrived at the line. Then H. A. Squibbs flashed into view and easily won third place.

The three leaders in the Boys' Race were Haight, Jr., Squibbs, Jr., and Coleman, Jr., in the order

named. They showed uncommon speed.

First place in the race for girls was won by Miss Schneider, with Miss Haight second, and Miss Henoch third.

Mrs. O. J. Shields was first in the Ladies' Race, with Mrs. H. G. Grosscup and Mrs. H. B. Macrae second and third.

The winning team in the Novelty Relay Race consisted of Messrs. Wood, Shields, Keegan, Ummenstetter, Dormeyer, Heidenreich, Lum, R. A. Smith, Van Cleef, Forster.

C. H. Schneider won the running broad jump.

In the standing broad jump F. W. Wood was first, O. J. Shields second and C. H. Schneider third.

Every member on the Tug of War earned at least the full output of the biggest bakery for a twenty four hour run.

The ancient injunction has it that we must earn our bread by the sweat of our brow.

They earned several carloads of bread during the

spective order were Squibbs, Jr., Coleman, Jr., and Haight, Jr.

They immediately made a run for the drinking fountain at the other end of the grounds.

The excitement ran high during the baseball game between Shields' team and Haight's team. The three best hits were made by Schneider, Kemp, and Lum.

Regular "Babe Ruth" home runs were made by Wood, Lum, and Ruhling.

Sensational fielding, pitching and base running were performed by Harry Macrae.

The line-up of the teams is as follows:

Shields.		Haight's.	
Koch, F.....	2nd	Macrae, H. B.....	SS.-P.
Wood, F.....	SS.	Dormeyer, H. A.....	LF.
Lum, D.....	3rd	Schneider, C.....	3rd
Shields, O. J.....	C.	Forster, H. C.....	RF.
Ummenstetter, S.....	P.	Kemp, I. S.....	1st
Ruhling, G.....	1st	Knapp, C. J.....	2nd-P.
Lee, R.....	C.F.	Lewis, W. J.....	P.
Funke, I.....	RF.	Heidenreich, C. R.....	CF.
Carroll, W. A.....	LF.	Haight, V.....	

The score was twenty-two to seven in favor of Shield's team.

Peterson and Billings were umpires, and showed such impartiality that they came thorough the game without a wrinkle or a scratch.

All the members of the winning baseball team were given as prizes



tug of war.

It was a real, sure-enough, Simon-pure tug of war.

The winning team consisted of Messrs. Wood, Knapp, Dormeyer, Keegan, Lum, Van Cleef, Squibbs, Ummenstetter, Heidenreich, Haight, Forster, Pipenhagen, Morton, Patten.

The Henoch Special Novelty Race, open only to smooth shaven men, was run backward over a course of fifty yards.

It was won by F. Wood. The prize was a Leslie shaving outfit in an enamel case donated by Harry Henoch. The contestants were obliged to run continuously with their back towards the tape.

The most amusing contest of the afternoon was the Biscuit Race for the children.

A light rope was stretched between two trees and on strings that hung therefrom were tied water biscuits.

The children were not permitted to touch the biscuits with their hands. The rules of the race required that they eat the biscuit without any assistance other than their own ingenuity in grasping the swaying biscuit.

The spectators laughed till the tears rolled down their cheeks. According to the rules, the youngster who was the first to swallow the biscuit and whistle thereafter won first prize. The winners in their re-



a pocket knife in a neat leather case by Von Cleff and Company, through the Chicago representative, F. Funke.

The highest number of points for all the games was won by F. Wood. The next highest by O. J. Shields.

Wood's name was, therefore, added on last year's A. Vere Martin prize loving cup of the Hardware Club of Chicago.

Shields' name was engraved on the new president's loving cup of the Hardware Club of Chicago, which takes its name from the genial Allan J. Coleman and is known as the Coleman cup.

A plentiful variety of prizes was at the disposal of the Hardware Club of Chicago for the winners in their various sporting events and contests of the outing. The list of prizes and their givers is as follows:

- 1 Box Cigars, American Steel & Wire.
- 1 Bottle Auto Polish, H. L. Feasel Laboratory.
- 12 Pocket Knives, Van Cleff and Company.
- 9 Scissors, Van Cleff and Company.
- 1 year's subscription to AMERICAN ARTISAN AND HARDWARE RECORD.



- 1 Hand Saw, Henry Diston Company.
- 1 Auto Filler Can, John M. Hart Company.
- 1 Hammer, 1 Pr. Pliers, 6 Spark Plugs, Vaughan and Bushnell.
- Phonograph Records, The Paramount Company.
- 2 Flash Lights, French Battery and Carbon Company.
- 1 Box Polish, Lindsay Light Company.
- 1 Garage Door Set, Stanley Works.
- 1 Wringer, Lovell Manufacturing Company.
- 1 Hand Saw, Geo. H. Bishop Company.
- 2 Meat Saws, Geo. H. Bishop Company.
- 1 Food Chopper, Universal Manufacturing Company.
- 2 Push-a-bikes, Jim Cumming.
- Assorted Lot Rubber Cement, Van Cleff Brothers.
- 1 Golf Bag, R. S. Buhrke Company.
- 1 Padlock, Corbin Cabines Lock Company.
- 2 Food Chop, Russell and Erwin Manufacturing Company.
- 1 Safety Razor, Leslie Leeds Incorporated.
- 1 Oil Stove, Columbina Hardware Company.
- 1 Safety Razor, Leslie Leeds, Inc.
- 1 year's subscription to *Hardware Age*.
- 2 Cans Floor Polish, Allan J. Coleman.
- 4 Cans Closet Cleanser, Allan J. Coleman.
- 1 Roll Wire Cloth, American Wire Fabrics Company.
- 1 Lawn Mower, Reading Hardware Company.
- 1 Security Auto Thief Signal, R. A. Hayes of the Security Sales Corporation.
- 1 McCoy Auto Lock, 1 Auto Pump, 1 Grease Gun, R. G. Stough.
- 2 Razor Stropps, 4 Knife Sharpeners, 2 Razor Hones, Ben Leve.
- 1 Clothes Dryer, A. Vere Martin.
- 1 Hatchet, 1 Pr. Pliers, Tom Bowler.
- 2 Pr. Pliers, Smith and Hemenway.
- 1 Saw, Symonds Manufacturing Company.
- 1 Wrench, Bonny Moore.
- 1 Coat Hanger, Bonny Moore.
- 2 Oilers, Al. Treat.
- 2 Pliers, M. Klein and Son.
- 2 Padlocks, Yale and Towne.
- 2 Pocket Knives, Fred Biffar.
- 1 Alum. Level, J. Sand and Sons.
- 1/2 Dozen Golf Balls, F. W. Wood, Jr.
- 1/2 Dozen Scissors, J. Weiss and Sons.
- 2 Razor Stropps, J. Weiss and Sons.
- 1 Electric Iron, Rock Island Manufacturing Company.
- 5 Auto Pumps, Bridgeport Brass.
- 1 Leather Portfolio, Erpenbeck and Sorgessman.
- 1 Door Check, Liquidless Door Check Company.
- 1 Shovel, Fischer and Hays Rope & Steel Company.
- 1 Auto Set, Geo. W. Wilkins.
- 1 Fishing Rod, Richardson Steel Fishing Rod Company.
- 1 Garage Door Set, Griffin Manufacturing Company.
- 3 Folding Auto Stools, Lussky White and Coolidge.
- 1 Garage Kit, Lee Hardware Company.
- 1 Stillson Wrench, Surpress Dunn and Commerce.
- 1 Can Auto Freezing Solution, Liberty Chemical Company.

Following the games, a substantial dinner was served al fresco. Everyone was happy. The only regret expressed by anybody was that daylight extends only about ten or twelve hours from sun-up to sun-set. Everyone would have liked to have spent a week's continuous daylight in the gay outing of the Hardware Club of Chicago.

Display Your Goods.

The average customer who comes into a store cannot reasonably be expected to make his maximum purchases of articles he does not see.

Conversely—and the statements of many dealers prove this—customers who came in with the intention of buying only one article, take home half a dozen because they see displayed here and there about the store things they need.

It never pays to have goods that people want, and will buy if they see, hidden away, gathering dust.

The merchants who are making the biggest turn-overs are those who keep their windows full of attractive displays and their stores arranged so that everywhere a buyer goes he will find something of interest.

One sure way of increasing the interest in any article shown either in store or window is to attach to it a neat tag or card showing the price.

This is the thing in which the average buyer is most vitally interested.

Affords Opportunities for Substantial Profits.

The greater the number and variety of things which the hardware man can carry in stock for the satisfaction of his customers, the more effective is the service of his store.

Every worth while opportunity for service is essentially a source of substantial profits to the dealer.

Commodities which have the character of permanence and which do not depend upon changing fashions or fads, are easily made staple in the trade of the hardware merchant.

The first thing for him to consider then is not immediate profit but service to his customers. Profit will follow of logical necessity.

It is from this angle that the Aladdin thermalware makes its strongest appeal to the dealer as affording him an opportunity for substantial profits.

The thermalware jar, shown in the accompanying illustration, has numerous service advantages. It is a reliable food and drink container, heat-insulated, so that hot things stay hot and cold things stay cold within its walls.

The inner lining is thick, tough and strong, and is guarded by sturdy, shock-absorbing insulation. The inner wall and the insulation are contained within a hardened aluminum ribbed jacket that is almost unbreakable.

The opening is four inches across, permitting the hand easily to be inserted for removal of contents or for cleaning.

The generous capacity of this jar; namely, one gallon of solid or liquid, is another strong selling advantage.

Dealers who want to enlarge their facilities for serving their customers would do well to get in communication with the manufacturers of this thermalware jar by writing to Aladdin Industries, Incorporated, Chicago, Illinois.



Thermalware Jar Made by Aladdin Industries, Incorporated, Chicago, Illinois.

New Corporation Is Chartered to Manufacture Hardware.

At Harrisburg, Pennsylvania, the H. A. Gable Company has been incorporated with a capital stock of \$300,000 to manufacture hardware. The incorporators are H. W. Spong, E. L. Cowden, and G. G. Golling.

Retailer Must Keep Moving in Pace With Markets.

The average merchant or manufacturer speaks of his "market" as if it were a physical entity, like his desk or his motor car, says The Right Angle. He seems to believe that when he has once "sold" this market it becomes his property and represents a constant absorber of his wares.

In a measure his mental attitude is that of one Dick Swiveller, who, when a bill was presented to him, calmly tore it up and dropped the pieces in the adjacent waste basket, remarking fervently, "Thank heaven, that's paid!"

Of course the facts are that no market remains fixed; but is a constantly shifting quantity, and requires to be "sold" constantly.

Official figures show that there were roughly 1,200,000 marriages in the United States in 1919.

That means that nearly two and a half million people who previously had no material interest in furniture, canned goods, cooking utensils, baby carriages, refrigerators, carpets, kitchen cabinets or preserving kettles, began to take an absorbing interest in such trifles of existence about the time they had made up their minds to visit the marriage license bureau. In other words, because of a very definite interest in each other's personalities and peculiarities they had quite suddenly become a "market" for some certain number of merchants and manufacturers.

Using the figures in the preceding paragraph, and taking a city like Chicago for example, there is a new market this year in the big town beside the lake of over 60,000 people who have never given a thought to household goods before, and they need to be "sold."

They need to be told about things that have never entered their minds before. Put another way, there are 30,000 new homes getting under way in Chicago during 1920.

Those homes will need quite a number of new plush albums, teething rings, and pillow cases, etc., etc.

The question then arises, where will these new buyers purchase, and what will they buy?

Quite obviously they will buy the goods that are advertised, or that they have become familiar with, perhaps unconsciously, through advertisements that have been kept running.

In other words, the much-talked-of "market" is a term, and not an entity, and it needs constant development and selling force applied to it through the advertising columns to keep it an active term.

Gets Trade-Mark Registered In Patent Office.

Under number 123,752, United States Patent Office registration has been procured by the National Cash Register Company, of Dayton, Ohio, for the trade-

mark shown in the accompanying illustration. The particular description of

National 123,752

goods to which this trade-mark applies is combined electrical printing or marking and communicating system and apparatus and

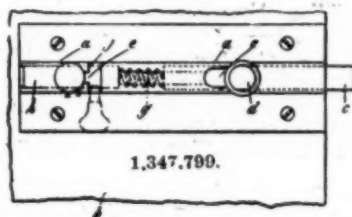
parts thereof. Application for registration was filed October 13, 1919, and the Company claims use of this trade-mark since February 9, 1905.

Leases Building for Factory.

The Elkington Building at Baraboo, Wisconsin, has been leased as a factory by the Allan-Diffenbaugh Wrench and Tool Company. This is a new corporation formed by A. C. Allan of Chicago and local associates of Baraboo to manufacture patented wrenches and other small tools.

Patents Lock or Bolt for Doors and the Like.

Frederick Fryer Wilkins, West Kilburn, London, England, assignor to Benjamin Edsall Johnson, London, England, has secured United States patent rights, under number 1,347,799, for a lock or bolt for doors and the like described in the following:



A latch device including a casing having an opening, a main latch member slidable therein and having a socket in one end, a locking bolt arranged within the casing and having a reduced end portion adapted to fit in said socket of the main latch bolt, a spring confined between the end of the main latch bolt and the shoulder formed at the junction of the reduced end portion of the locking bolt with the body thereof, and a handle carried by the body of the locking bolt and cooperating with the opening in the casing to be held in locked position.

Forms New Hardware Company.

With a capital stock of \$50,000, the C. A. Bruhns-Stewart-Widder Corporation has been chartered at New York City to engage in the manufacture of hardware products. The incorporators are C. A. Bruhns, J. A. Stewart, and J. L. Widder.

Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce, through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

33539.—A commercial agent in Morocco desires to secure the representation for the sale of hardware. Quotations should be given c. i. f. Tangier and Larache. Reference.

33543.—A manufacturers' buyer in Austria desires to secure an agency for the sale of American goods. Reference.

33548.—A commercial agent with branch offices and agencies throughout the Near East desires to secure the

representation of firms for the sale of builders' and other hardware. References.

33559.—An American firm with a branch office in Brazil desires to secure an agency for the sale of hardware. Quotations should be given c. i. f. Brazilian port and f. o. b. New York.

33560.—An importing firm in Denmark desires to be placed in communication with manufacturers and exporters for the sale of manila binder twine, sisal binder twine, seaming twine, and sack-sewing twine. References given.

33563.—A merchant in Australia desires to secure an agency for the sale of motor cars, motor cycles, and accessories. Quotations should be given c. i. f. Lyttelton. Samples of soft goods are requested forwarded by parcel post. References.

33565.—A mercantile firm in India desires to purchase and secure an agency for the sale of toys, brushes, cutlery, etc. Quotations should be given c. i. f. Indian port. Terms pay payment, letter of credit in New York, or 25 per cent with order and the balance against documents. Reference.

Coming Conventions.

Southern Association of Stove Manufacturers, Hotel Cleveland, Cleveland, Ohio, August 30, 31, and September 1, 1920. W. H. Cloud, Secretary, 216 Glendora Avenue, Louisville, Kentucky.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 20, 21, and 22, 1920. F. D. Mitchell, Secretary-Treasurer, 4106 Woolworth Building, New York City.

National Hardware Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 20, 21, and 22, 1920. T. James Fernley, Secretary, Philadelphia, Pennsylvania.

Automotive Equipment Association, Coliseum, Chicago, Illinois, November 15, 16, 17, 18 and 19, 1920. William M. Webster, Commissioner, 1813-1818 City Hall Square Building, Chicago, Illinois.

Automobile Accessories Branch of the National Hardware Association, Coliseum, St. Louis, Missouri, November 30, December 1, 2, and 3, 1920, headquarters, Hotel Statler. T. James Fernley, Secretary-Treasurer, 505 Arch Street, Philadelphia, Pennsylvania.

Texas Hardware and Implement Association, Adolphus Hotel, Dallas, Texas, January 18, 19, and 20, 1921. A. M. Cox, Secretary, 1808 Main street, Dallas, Texas.

Western Retail Implement, Vehicle and Hardware Association, Kansas City, January 18, 19 and 20, 1921. H. J. Hodge, Secretary, Abilene, Kansas.

Pacific Northwest Hardware and Implement Association, Seattle, Washington, January 18, 19, 20, and 21, 1921. E. E. Lucas, secretary, Hutton Building, Spokane, Washington.

Missouri Retail Hardware Association, Planters Hotel, St. Louis, Missouri, January 25, 26, and 27, 1921. F. X. Becherer, secretary, 5106 North Broadway, St. Louis, Missouri.

Indiana Retail Hardware Association, January 25, 26, 27 and 28, 1921. (Place to be announced later.) G. F. Sheely, Secretary, Argos, Indiana.

Oregon Retail Hardware and Implement Dealers' Association, Portland, Oregon, January 25, 26, 27, and 28, 1921. E. E. Lucas, secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Dealers' Association, Louisville, Kentucky, January 25, 26, 27 and 28, 1921. J. M. Stone, Secretary, Sturgis, Kentucky.

Nebraska Retail Hardware Association, Hotel Rome, Omaha, Nebraska, February 1, 2, 3 and 4, 1921. George H. Dietz, Secretary, Lincoln, Nebraska.

Wisconsin Retail Hardware Association, Milwaukee, Wisconsin, February 2, 3 and 4, 1921. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Oklahoma Hardware and Implement Association, Oklahoma City, February 8, 9, and 10, 1921. W. B. Porch, secretary-treasurer, Oklahoma City, Oklahoma.

The Michigan Retail Hardware Association, Grand Rapids, Michigan, February 8, 9, 10, and 11, 1921. Arthur J. Scott, Secretary, Marine City, Michigan.

Iowa Retail Hardware Association, Des Moines, Iowa, February 8, 9, 10, and 11, 1921. A. R. Sale, secretary-treasurer, Mason City, Iowa.

Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, February 8, 9, 10, 11, 1921. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 15, 16 and 17, 1921. Leon D. Nish, Secretary, Elgin, Illinois.

California Retail Hardware and Implement Association, San Francisco, California, February 15, 16, and 17, 1921. LeRoy Smith, secretary, 112 Market street, San Francisco, California.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 15, 16, 17, 18, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Ohio Hardware Association, Columbus, Ohio, February 15, 16, 17 and 18, 1921. Hotel Headquarters, Deshler Hotel, Exhibition in Memorial Hall. James B. Carson, Secretary, Dayton, Ohio.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 21, 22, and 23, 1921. George A. Fiel, secretary, 10 High street, Boston, Massachusetts.

New York State Retail Hardware Association, Rochester, New York, February 22, 23, 24, and 25, 1921. John B. Foley, Secretary, 607 City Bank Building, Syracuse, New York.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 22, 23, 24, 25, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 8, 9, and 10, 1921. Troy Thompson, Secretary, Treasurer, Dalhart, Texas.

Hardware Association of the Carolinas, Charlotte, North Carolina, May 10, 11, 12, and 13, 1921. T. W. Dixon, secretary-treasurer, Charlotte, North Carolina.

Southeastern Retail Hardware and Implement Association (composed of Alabama, Florida, Georgia and Tennessee), Atlanta, Georgia, May 17, 18, 19 and 20, 1921. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta, Georgia.

Retail Hardware Doings.

Kansas.

Tinsley Hardware Company has been incorporated with a capital of \$30,000 at Baxter Springs.

Michigan.

Sherwood Hall of the Sherwood Hall Company, saddlery, heavy hardware, vehicles and auto accessories, of Grand Rapids, passed away.

John B. Fix, Jr., sold out his building and is now closing out his harness and hardware business at Monroe.

Fawley Abbott Company opened a furniture store at Muskegon.

Minnesota.

Groth Hanson, hardware dealer, dissolved partnership. H. J. Hanson will continue the business at Gary.

P. Geiser has bought the general store and hardware business at Polit Grove, R. D. Elmora.

Nebraska.

Karl J. Bryan has resigned his position as traveling salesman for the Shapleigh Hardware Company at Superior and has bought a half interest in the hardware store at Hardy with Willard Fair.

Martin Jacobson and Jacob Jacobson have purchased the implement business of H. J. Breunig at Newman Grove.

O. L. Wiemer and Company, Fremont, has disposed of its hardware, wall paper and paint store to the Farmers Land and Cattle Company of Omaha.

Peter Thomson has sold his implement stock to O. S. Timmons who is now possessor of the business at Tilden.

J. E. Ross has bought out Edward Hugh's interest in the Ross and Hughes implement firm at New Castle.

C. R. Fletcher of Grand Island has recently become owner of the Monroe hardware store, at Monroe, and will stock up and make a live hardware business which will be of much value to the community.

Ohio.

The Bullfinch and Patterson Hardware Company of Niles have filed a petition in common pleas court asking a judgment in the sum of \$156.95 due them for material from the Campbell Dilly Company of Warren.

Wisconsin.

E. G. Hendrick and Son have taken over the Louis Glover hardware business and building at Barneveld.

J. A. Gilles has purchased the interest of A. M. Smith in the hardware business of Smith and Wilhelm Company, 1723 Monroe Street, Madison.

H. T. Scofield, head of Scofield Company, hardware dealers, died suddenly at Sturgeon Bay.

Philip Ludberg purchased hardware stock of Harris A. Smith at Florence.

Theo Lenmartz and Louis St. Angelo will open a hardware store at Frederick.

Rush Garber and Artlett Company, furniture and hardware dealers, have increased their capital from \$75,000 to \$100,000 at Marlin, Texas.

The Jennison Hardware Company, Bay City, Michigan, has increased its capital from \$300,000 to \$500,000.

Scott and Hart Stove and Furniture Company have been incorporated with a capital of \$1,000,000 at Terre Haute, Indiana. Incorporators are Oscar Hart, R. M. Robinson, D. F. Scott.

The Circleville Hardware Company has increased its capital at Circleville, Ohio, from \$25,000 to \$80,000.

Navel Hardware Company of Cuero, Texas, has increased its capital from \$30,000 to \$60,000.

Selling Automotive Accessories

How Hardware Dealers Can Increase Their Profits by Handling Standardized Automotive Accessories. Facts and Suggestions to Aid Them in Giving Better Service.

FITTING THE CONNECTING ROD.

It is almost impossible for the average car owner to get perfect connecting rod fitting by scraping only the lower half of the bearing. This is the usual practice. The ideal way to fit connecting rod bearings is to do the work when the crankshaft is out of the engine.

When the shaft is out of the engine it is set upright on a bench and each connecting rod bearing is fitted separately. This is done as follows: The crank pin or the part of the crankshaft that operates in the connecting rod bearing is spread lightly with some Prussian blue or lamp black made into a paste with a little oil. The connecting rod shims are then made smaller, just a trifle, and the connecting rod is placed in its proper position on the crank pin.

The crank pin connecting rod is then turned around so that the bearing surfaces can rub against each other. After this is done about a dozen times the connecting rod is removed and a cloth used to remove the excess coloring matter from the bearing. This will leave the high spots of the bearing showing, because the coloring matter is imbedded in the metal. In fact the only reason for using the coloring is to cause it to be imbedded in the high spots.

These high spots are then removed by means of a bearing scraper. It is quite possible that one-half of the entire bearing will show color, in which case that half must be scraped. Then, again, only isolated spots may show color. At any rate, in scraping only the color spots which remain should be removed and the cutting should not be done too deep, merely what might be called a surface scraping. At the same time the cuts should be cleaned so that the metal is not left with a number of rough spots.

After the scraping the process described is repeated; that is, the crank pin is colored and the rod placed in position, whirled around a few times, and then removed, cleaned, and examined for high spots. This done often enough so that there will be bearing surface or little spots over the entire bearing surface of both halves of the bearing, and at the same time the connecting rod will turn freely on its pin. It must not be so free that it can be whirled around, and it must not be so tight that a great deal of effort must be used to turn it.

Cut Down Amount of Gasolene By Adjusting Carbureter.

The first point of attack in the campaign to cut down fuel consumption is the carbureter.

It has been said that the average car owner runs his engine on a fuel mixture nearly twice as rich in

gasolene as it needs to be; in fact, the engine will give its best work on a mixture as lean as possible.

Practically all modern carbureters have a wide range of adjustment, so that all the air needed may be got by adjusting the instrument itself.

It is a very simple matter to set the carbureter for more and more air until the mixture is too thin for operation and then turn back until the engine is running smoothly again with maximum air intake.

This question of fuel mixture is a very important one, since, if American motorists habitually ran on a mixture that was twice as rich as need be, the consumption of gasolene would be just twice as great as the actual needs.

In the interest of patriotism, then, let every car owner make sure that he is using a mixture just as lean as is consistent with proper operation.

Moreover, the engine may actually run better on the leaner mixture, to say nothing of the reduction of carbon deposits that will ensue.

Having adjusted the carbureter to supply the proper fuel mixture, the entire fuel system ought to be gone over.

Dirt in the pipes, rust in the strainers, or foreign matter in the gasolene tank help to cut down the efficiency of the whole engine.

Leaks in the system should be carefully hunted down and eliminated.

This means not only actual leaks, but power leaks, for wasted power means additional consumption of fuel to make good the deficiency.

Will Make Piston Rings.

The recently organized P. R. Piston Ring Company, Eau Claire, Wisconsin, is purchasing equipment for a machine shop to specialize in the manufacture of piston rings. The incorporators of the company are C. M. Pratt and E. J. Ross.

Indicates an Easy Way to Replace Valve Springs.

An easy way of replacing valve springs consists of compressing each spring in a vise until it is short enough to go easily into place and allowing the holding key to be inserted.

While in this compressed condition, it is tied with wire so that it can not expand.

After it is in place and the key is put in the wire is clipped and removed.

"The conditions of success in life are the possession of judgment, experience, initiative and character."—Gustave LeBon.

Advertising Help and Comment

Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.

Tell Truth About Goods.

Tell the truth. It pays. Holding back the facts about the commodity is a form of lying. If you are selling cast steel hammers, say so. Don't leave the impression that they are drop forged steel. Earn the confidence of your customers and you can hold them.

* * *

Now and then a pun helps center the attention upon the advertisement, as in the case of the Raleigh Roofing and Cornice Company. This advertisement appeared



FAR-SEA-ING FOLKS
Consult Us For
ROOFING
and
SHEET METAL
Requirements
Our Service is Prompt and
Reliable.



Raleigh Roofing
AND CORNICE CO.
PHONE 504
107 W. DAVIS ST.
AUTO RADIATOR EXPERTS

in the *News and Observer*, Raleigh, North Carolina.

Manifestly, the roofing and sheet metal business is of so general and varied a character, that it is not

practicable to quote definite prices in an advertisement.

Each job must be figured on the basis of material and labor required. No two contracts are exactly alike.

The illustration at the top of the advertisement of the Raleigh Roofing and Cornice Company, with the words "Far-Sea-Ing Folks," has no direct bearing upon the copy.

Nevertheless, it arrests attention and its play on words puts the reader in good humor.

The other illustration at the bottom is very much to the point.

It emphasizes a department of sheet metal work which can be made very profitable, namely, that of Automobile radiator repair work.

* * *

Illustrations Aid Sales.

The first alphabet was in the form of pictures. We think in pictures. If we read the word "rose," before it can convey the idea to our minds we have to make a picture in our imagination of a rose. This is elemental. Therefore, for big results be sure to use pictures in your advertisements.

* * *

The Elephant's Advantage.

The elephant has one advantage over human beings. He is said to have a long memory. We have short memories. Consequently, you have to keep on advertising if you want people to remember that you are in business.

* * *

Connecting the store's window display with its newspaper publicity is a distinct advantage. Reynolds, Thompson and Robinson deserve praise for the paragraph in their advertisement in the *Norwich New York Sun*, which urges the reader to see the camping articles in the store's window exhibit.

This advertisement is well worded and arranged. Although the space occupied is not big enough for detailed description of the va-

rious commodities, nevertheless, there is room for a statement of prices for each article.

This would greatly enhance the appeal of the advertisement. No

The Right Equipment

**MAKES THE
PICNIC A DELIGHT**

See the "camping"
articles in our window.

Camp Stoves

Thermos Bottles
Thermos Containers
Thermos Boxes
The Cooking Kits
Lunch Baskets
Winchester Rifles
Anglers' Tackle
Paddles

**Reynolds, Thompson
& Robinson**

matter how much argument there may be to the contrary, people are interested in knowing prices in advance.

Even a mechanic who doesn't hesitate to buy eight or nine dollar silk shirts, is interested in knowing what a thermos bottle or camp stove is going to cost him when he reads such an advertisement.

Certainly, it would not weaken the advertisement to state prices and, undoubtedly, more prospective buyers would be influenced by the figures in dollars and cents.

Warm Air Heating and Ventilating

*Better Installations. How to Sell More Warm Air Heaters.
Reports of Progress in Warm Air Heater Research Work.
Ventilating Factories, Garages, Theaters, and Houses.*

ENTERTAINS SIXTY DEALERS FROM NEARBY TERRITORY

At a recent conference with sixty of its nearby dealers, the Majestic Company, Huntington, Indiana, clearly demonstrated the advantages of close, warm fellowship in the trade.

Only dealers in the nearby territory were invited to the conference, owing to inadequate hotel accommodations.

A new hotel, however, is to be built in Huntington that will take care of a reasonable number of guests.

bestos paper, chain and regulator in position, fire built in the furnace and smoke passing out through the flue, the two mechanics consumed one hour and forty minutes which is a very good record on a job of this character.

Short talks were made by dealers on proper installation of warm air heater systems, salesmanship, advertising, cooperation between dealers and manufacturers, and other subjects pertaining to the retail furnace industry.

The Majestic Company served such a good dinner to their guests that they insisted upon calling it a ban-



Group of Dealers, Plant of the Majestic Company, Huntington, Indiana.

Hence, next year the Majestic Company will be able to invite a larger number of its dealers to participate in a similar conference.

A considerable percentage of the dealers drove to Huntington in their own cars.

At the conference the dealers met the Company's salesmen and were taken through the plant for a study of the manufacturing processes through which the products of the Majestic Company pass.

One of the entertaining features of the conference was a demonstration of the installation of a Majestic Duplex Heating System, which was carried out by erecting a temporary floor, using two of the Company's mechanics and having them complete the job against time.

From the time they started erecting the furnace, until the job was completed, pipes covered with as-

quet. The food was not only delicious but abundant and perfectly served—abundant in the full sense of that adjective.

Using its guests' cars in addition to its own, the Majestic Company took the dealers on an automobile trip to the city and drove them to the Country Club for luncheon.

The good accomplished by such a conference redounds equally to all concerned.

It puts business on a human basis—on a basis of common understanding and service.

The Majestic Company is to be congratulated for setting an example of friendly cooperation with its dealers.

A serious blunder is made whenever we estimate people by their nationality or by any exterior quality.

Need Trained Men to Operate Ventilating Systems.

The need of training for janitors and custodians of buildings, having ventilating systems is strongly urged by E. S. Hallett of St. Louis, Missouri, member American Society of Heating and Ventilating Engineers. In a discussion of the topic at the last national meeting of the Society, he said that, with reference to the operation of ventilating systems, the janitor problem is one that requires great care and discretion.

In St. Louis, for example, it was found necessary to inaugurate a system of training for the public schools whereby the proper instruction would be given to the men and women entrusted with the care of the buildings.

About three years ago the janitors' Saturday class was started for the purpose of securing better operation of the heating and ventilating apparatus. It was necessary to demonstrate to the janitors that the instruction was leading to an elevation of their positions and standing.

By degrees the men assumed more responsible duties. The salary increases were given without political or other influences. The instruction is given by teachers taken from the department who are in touch with the work. Instructors taken from the instruction department of the schools could not conduct the janitors' class.

In commenting on Mr. Hallett's paper, John Howatt, President Illinois Chapter American Society of Heating and Ventilating Engineers, said:

"I also visited some of the schools in St. Louis, and I was greatly impressed with the fact that the custodianship of the buildings seemed to be in the right hands. Four of the schools were remarkable examples of cleanliness and orderliness from the operation standpoint.

"As I understand it, the policy in St. Louis is, that there shall be no rigid rules governing the work. In Chicago, and in most of the other large cities, nearly everything is covered by rules which govern.

"St. Louis is fortunate in that those in an administrative office are not hampered by a set of cut and dried rules which, therefore, results in giving an opportunity for initiative and individual work.

"On the other hand, of course, it permits opportunity for great favoritism in case administrative officers are inclined to show favoritism.

"One set of janitors in a school or district who are in favor, could get more than a set of equally competent janitors in another school who happen to be out of favor with the administrative officer, that is why in Chicago this system was done away with.

"Years ago an arrangement was in vogue by which the salary of each employee of the school was determined by officers of the Board, and it resulted in a janitor's pay going up and down with his political affiliations.

"To overcome that condition, the engineers of the Chicago schools organized and had a set of rules established that didn't hurt any of them.

"The method of employment practiced in St. Louis results in a good school condition, and that is because

the officials are honest who are at the head of the school building department.

"The conditions may change in St. Louis sometime when it would be better to have rules for the protection of the employee.

"The school for janitors I understand is spreading rapidly everywhere. I know this subject of a school for janitors is being taken up in Minneapolis.

"The President of the Society is interested in establishing such a school in Chicago under the Smith-Hughes Law, not for school janitors alone, but for the thousands of janitors in the apartment houses.

"There is no doubt, but that such an institution can be started in Chicago next fall with the aid of other people interested in this work. I believe, however, that St. Louis has gone further in this school work than any other city, and there is no doubt, that this work will spread."

Makes a New Device for Economizing Fuel.

There is every likelihood of coal going up to high price levels this fall and winter.



Fuel Economizer, Made by Domestic Fuel Economizer Company, Dayton, Ohio.

More than ever, people are looking for some means to get more heat from the fuel which they use.

That is why uncommon interest attaches to the Domestic Fuel Economizer, shown in the accompanying illustration.

This device sets in the center of the fire grate and the coal is piled around it.

The air coming up through the slots in the fire grate, passes through the openings in this device and thus supplies a larger amount of oxygen for combustion throughout the mass of burning fuel.

Installers of warm air heaters should take the trouble to study this economizer and its method of operation.

Further details and prices can be obtained by addressing the manufacturers, The Domestic Fuel Economizer Company, 320 Mutual Home Building, Dayton, Ohio.

Furnishes Directions for Cold Air Chambers.

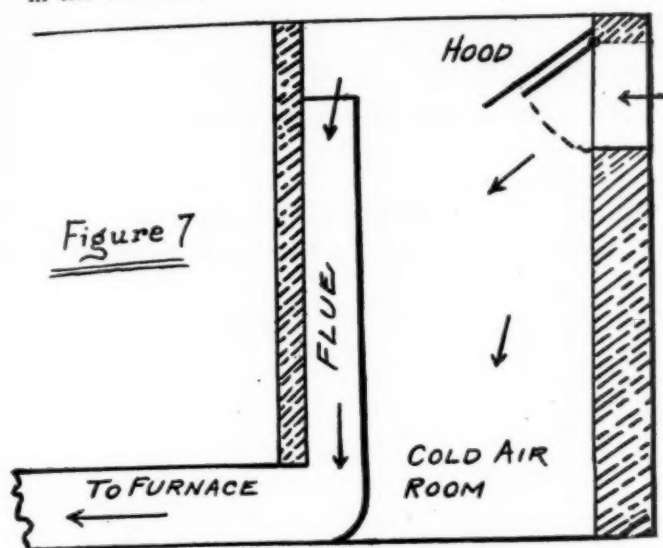
A warm air heater installer asks for directions concerning construction of a cold air or mixing chamber.

His question affords an opportunity again to emphasize the advantage of possessing text-books covering the average requirements of the trade. His query is briefly and plainly answered in "The Ventilation Hand Book," by Charles L. Hubbard, as follows:

One form of mixing chamber is shown in Figure 7. In this case the entering outdoor air is first thrown downward by a deflecting hood, which breaks the force of the current during high winds and also causes the coarser particles of dirt and dust to fall to the floor.

The opening into the flue leading to the furnace is

at a point near the ceiling, and so situated that the entering air cannot blow into it, hence the velocity of flow through it is produced by the general pressure in the chamber.



Arrangement of Fan and Cone for High Head and High Efficiency.

When air is returned from the building, to be mixed with outside air and reheated, it is best brought back to the cold air chamber, where it mingles with the cooler air before passing into the furnace casing.

In the arrangement shown, the inlet window is hinged at the top and swings upward into the hood as indicated.

The chamber may be partitioned off from the basement by means of 8-inch brick walls, wire lath and plaster, or a wooden construction of matched sheathing may be used if it is desired to keep the expense as low as possible.

The hood and duct in the cut are of galvanized iron, but these may also be constructed of wood if more convenient, although special care must be taken to make the joints tight against the inleakage of dust.

Is Convenient for Low Basements.

The general trend of builders to construct low houses and bungalows, and dwellings with basements of small depth makes the Apex Warm Air Heater, depicted herewith, an appropriate heating plant to handle, declare the manufacturers, the Victor Stove Company, Salem, Ohio. However, its smallness of stature does not interfere with the powerful heat producing qualities of the Apex Warm Air Heaters, declare the manufacturers.

The Victor Stove Company is the successor of the

Youngstown Furnace Company, Youngstown, Ohio, and takes over completely that company's line of Lion and Apex Warm Air Heaters. Merely for the accommodation of certain classes of dwellings and for the conservation of space, was the Apex Warm Air Heater built in the proportions described. Being made of heavy metal, this warm air heater is unusually durable. The radiator used is of the all cast horseshoe type. It is made *extra* large and in two sections, insuring a uniform thickness of metal throughout, so that the maximum heat is transmitted from the entire surface. The fire pot is of the slotted variety. The apertures in it admit an even draft into the coal bed and insure proper combustion. Apex Warm Air Heaters are designed throughout successfully to burn hard coal, soft coal, or coke. No matter what type of fuel is used, the amount of heat derived by means of this warm air heater is economical, judging by the sum expended for fuel. Being constructed of good metals, the Apex Warm Air Heater will last an uncommonly long time. Besides the Apex Warm Air Heaters, the Victor Stove Company manufacture Lion Warm Air Heaters. Dealers desiring information on either of these types of warm air heaters can obtain it by writing to the Victor Stove Company, Salem, Ohio.

The Whole Community Suffers from Price-Cutting.

Democracy is founded on the greatest good of the greatest number. Government, education, philosophy, science—all recognize that the few must not be allowed to flourish at the expense of the many.

A price-cutting retail merchant sells certain standard articles at ruinously low prices. He takes a loss on the sale. But of course he benefits in some other way, else he wouldn't have held the sale. So, also, do the few customers who get the bargains receive a temporary benefit.

But, on the other hand, the whole community suffers.

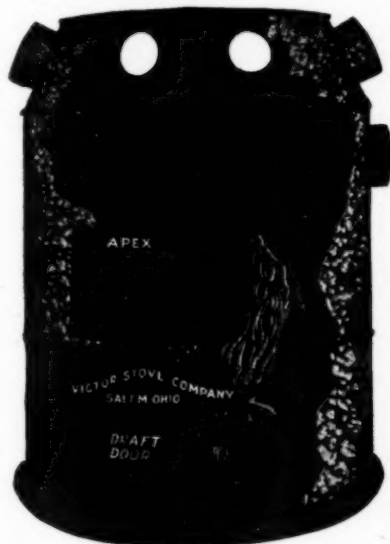
First, the price cutting shakes public confidence in the value of the articles cut.

If people have once bought a thing for 19 cents, it is hard to make them believe that it is worth 25 next time. So, if the price cutting continues, it becomes more and more difficult to sell the article for what it is really worth. Something else, without a known value, and, therefore, not attractive as a bargain, takes its place.

Second, price cutting breaks down the established standard of values. It makes it hard for the public to know what merchandise is really worth. It thus opens the way to general over-charging by unscrupulous merchants.

Third, price cutting undermines the small store which maintains an honest, steady level of prices on all goods the year round. The small store thus threatened is one of the important economic factors of community life.

Fourth, price cutting hurts the trade of reputable manufacturers by creating an unfair doubt as to the real worth of their goods.



Apex Warm Air Heater, Made by the Victor Stove Company, Salem, Ohio. The Victor Stove Company is the successor of the

Practical Helps for Tinsmiths

No Two Jobs Are Exactly Alike. Therefore, the Sheet Metal Worker Has to Meet Each Difficulty as It Comes. Send Your Problems to Us. Let Our Experts Help You.

PATTERN FOR TRANSITIONAL SEMI-CIRCLE TURN.

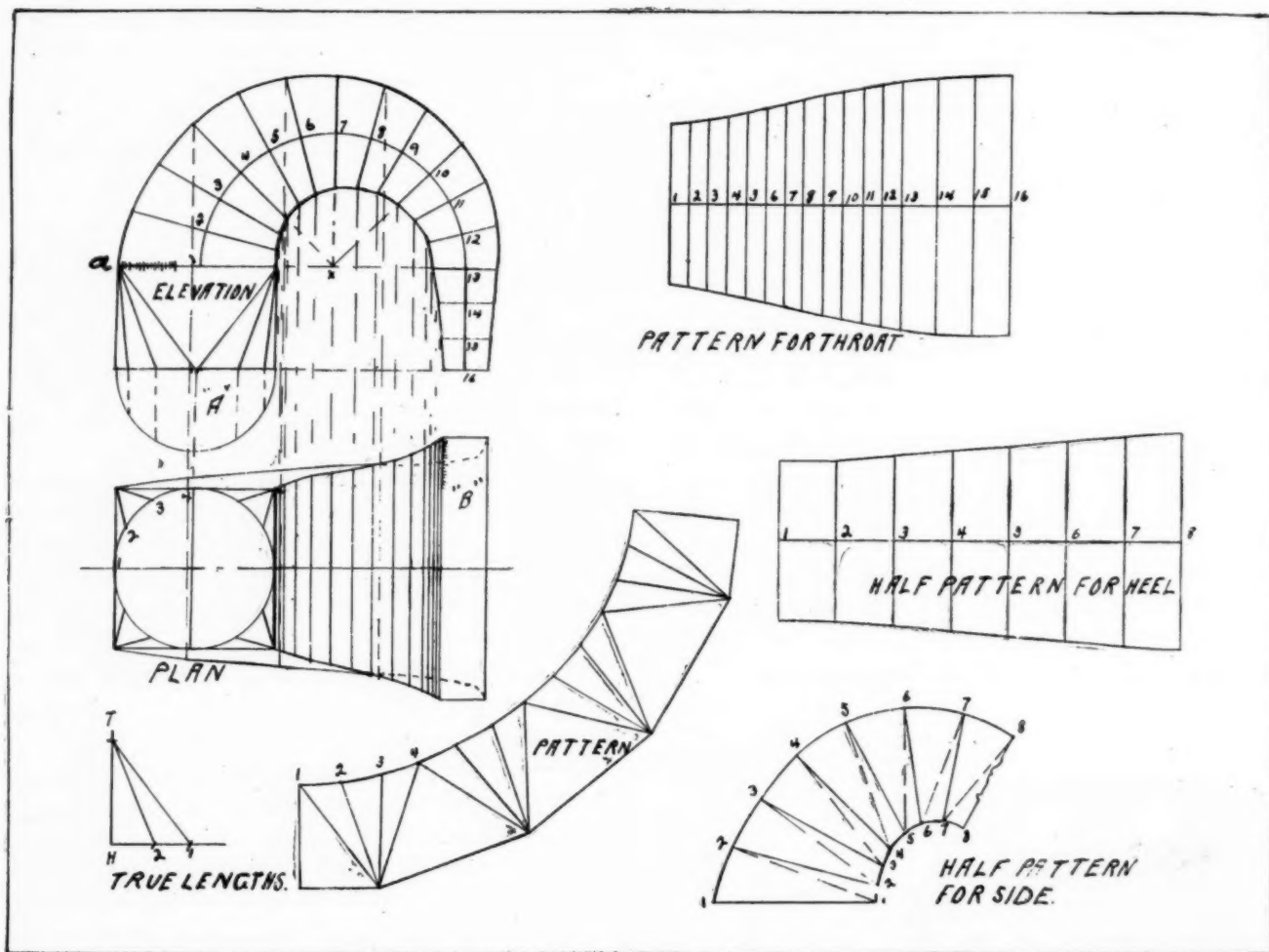
By O. W. Kothe, Principal St. Louis Technical Institute and Instructor in the David Rankin, Jr., School of Mechanical Trades, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

In factories and other mills problems as in the annexed drawing. A very narrow rectangle as section "B" of plan is used on the one end of elevation. The other end is transformed to a square to round.

the width 1-a and setting it above center line of section "B." Then subdivide the remainder in as many equal spaces as are in center line of side elevation.

By dropping lines from all points in throat across the center line of plan, then by means of the spaces in "B" of equalizing scale, the throat lines are set off, the heel would be done the same way. The plan is not exactly required, only for section "B" and the quarter plan for square to round.

To set out the pattern for throat, pick each space



Pattern for Transitional Semi-Circle Turn.

We first draw the side elevation, describing the center line from X. Next divide this center line in any number of equal spaces, and from each point in the semi-circle draw radial lines to X as shown.

Measure the base lines and pick the half width from rectangle and set it over from 1 on line 1-a, and the difference divide in the same number of equal spaces as a are in the center line 1-16. Then pick these spaces from 1, and set off on the radial lines. In this way the outlines of side elevation are proportioned.

The plan view is developed similarly only taking

separately from throat of elevation and set on a line as 1-16. Draw stretchout lines and then with dividers pick the lengths from "B" stepping from center line to each of the divisional spaces.

Set these in stretchout on similar numbered line and you establish the intersections for tracing the outline of pattern. The heel pattern is set out in the same way, only picking the girth from the heel of elevation.

The side pattern is set out by using the spaces along the miter cut of throat and heel pattern as girth of the sides. No true lengths are required as

the difference in rise in dotted lines would only be one of the spaces in "B."

This is not enough to make any difference. Hence the triangulating lines are picked direct from elevation and used that way. Each space must be picked separately and transferred into pattern.

The square to round sets straight and is developed the same as all such problems we have often taken up in these columns. Laps must be allowed extra.

Describes Conditions of the Tin Industry in Bolivia.

Bolivia is not only the second producer of tin today, says the *Mining Journal* of London, England, but she possesses by far the richest deposits, and, in consequence, is the country toward which expectations of future expansion of output are chiefly directed. Not only is this the case in regard to American interests, where the American Smelting and Refining Company, after the examination of most of the chief properties, has finally embarked upon an expenditure on a wholesale scale, but even such distant enterprises as the Straits Trading Company, after estimating the possibilities of expansion in Siam, Australia, and more recently in Yunnan, has decided to endeavor to obtain a footing to fill their requirements of ore so much extended by additional smelting plants created during the war.

In these circumstances the political conditions in Bolivia become of very direct interest to the tin industry, and the news of the revolution, which resulted in the fall of Gutierrez Guerra's Government, and his exile to Africa, and the triumph of a Junta which will shortly make its appeal to the suffrages of the country, are events which are bound to attract attention in industrial quite as much as political circles.

Whatever may turn out to be the composition and complexion of the forces which have overthrown the previous Government in Bolivia, it is obvious that a revolutionary period has been reached, which at bottom rests upon commercial considerations of various kinds, and to that extent an element of uncertainty has been introduced into the hitherto peaceful development of Bolivia, which may at any time affect the tin industry.

Its effects are manifest already in the stiffening of the ore market in Liverpool, though there are other contributory circumstances, such as the anticipation of a displacement in the Cornish supplies, the reappearance to a certain extent of the German buyer, shipments to the American market, and last, but not least, an anticipation that the Bolivian supply, apart altogether from any possible political trouble, is likely to be lower.

In explanation of this last view, which is not that currently put forward on this side, the position at Llallagua is mainly responsible. During the second half of 1919, the output of concentrates averaged about 1,800 tons per month, while it is reported that it is now down to about 1,200.

In addition, the Directors are reported as declaring that the reserves are exhausted, and the outlook uncertain.

There exists a strong disinclination in Bolivian, as in other tin mines, to develop ore reserves for several years ahead of the mill, based, in some cases at any rate, on the impossibility of keeping the workings open for a lengthy period before stopping. It is not by any means the first time that Llallagua has been reported as working out.

At the same time it is obvious that, with a property pushed so much as this has been during the war, periods must occur when the developments will be poorer, and the output in consequence temporarily depleted.

As Llallagua last year produced about 40 per cent of the output, serious decline in production would sensibly affect the position, even though there are a number of lesser producers, which as our correspondent in the issue of the *Journal* of June 26 last indicated, are likely to increase.

Ever since early days in the war there has been an accumulation of ores in Liverpool, so that sellers have had to meet heavier returning charges than before.

The position, owing to the increased competition, is now improving for them. Apart from the obvious anxiety of the American Smelting and Refining Company to increase its supplies of ore, the action of the Straits Trading Company, in arranging for shipments over so great a distance as is involved by the voyage to San Francisco and trans-shipment there to the East, is significant of the fact that the smelting capacity of the world is much in excess of the production, even if we eliminate altogether the Arica smelter, which is now closed down, and the re-opening of which is problematic.

There appears to be a disposition in the United States to establish works on a small scale to reduce tin ores for the consumption needs of a bigger business such as the making of alloys, and the big smelting businesses proper are always tending to expand, so that, though the price of tin may not improve, the miner has the prospect of somewhat better terms in the way of returning charges.

Defines Meaning of Efficiency.

"By efficiency I mean effective power for work and service during a healthy and active life," explains Dr. Charles W. Eliot in his monograph on Education for Efficiency. "This effective power every individual man or woman should desire and strive to become possessed of; and to the training and development of this power the education of each and every person should be directed.

"The efficient nation will be the nation made up by aggregation of individuals possessing this effective power; and national education will be effective in proportion as it secures in the masses the development of this power and its application in infinitely various forms to the national industries and the national service."

"Nonsense, child. Nature never makes a ferret in the shape of a mastiff. You'll never persuade me that I can't tell what men are by their outsides."—George Eliot.

Craftsmanship Spells the Difference Between the Successful Mechanic and the Wage Worker.

Art Means the Skillful Application of Science To the Requirements of Life and Industry.

Written especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Peoria, Illinois.

(Copyright by J. C. Greenberg.)

You are either an artist in your business or just a plain tinner.

Did you ever stop to think along this line?

The word "artist" is more often misunderstood than any other word in the English language.

Ninety per cent of humanity have an idea that an artist is one who paints pictures, or one who uses a delicate chisel to carve in marble, or perhaps one who takes a lump of clay and moulds a beautiful figure.

No sir. There is more to Art than merely painting or sculpture.

Art exists in every branch of human endeavor, providing that endeavor is for a legitimate purpose.

Please note I said legitimate purpose.

The illegitimate artist may get money, but he cannot get the respect of his fellow man.

There is where the rub is.

For example, the confidence man, the gambler, the pickpocket, the crooked salesman, the liar—all of these men are artists, but their purpose is not legitimate.

Therefore they do not command respect.

It is a law of Nature that where there is no respect there can be no confidence—and confidence is the bed rock of legitimate business.

Without confidence in your business you will fail as surely as the sun shines.

You can not beat this law. Nobody can beat it.

It has been tried and those who have tried it went down to ruin ultimately.

In order to know how to become an artist in the sheet metal line, we should know just what art is. When we know what a thing is we can better attain it.

You have often heard science and art mentioned. These two things nearly always go together.

Please note that science is generally mentioned first, and art second.

Why is this?

It is because science is the mother of art.

Here is how it works out.

Science is made up of facts. When a thing or a theory is presented and based on logical lines, it is because science has found that it is the same all the time.

This sameness has been proved many times in accordance with the facts it contains.

The scientist then organizes the facts and says, "If you do it in accordance with science you will be right."

Now then here is where art steps in. Art is *doing*. Art means the application of science skillfully.

It means the doing of the right thing at the right time the right way.

If you can do this, you are an artist.

There may be many good ways to do a thing, but there is only one best way. This best way is art.

Now then, let us return to the sheet metal art.

I want to show you that your work is one of the greatest arts in existence because it is a useful art. Now let's go.

There are three things that all humanity needs in order to live.

I really mean that the three I have in mind are absolutely necessary to life—without them man would die.

The three things are food—clothing—and shelter. Without food we could not sustain life.

Without clothing we would become victims of immorality.

Without shelter we would be overcome by the elements and eventually die of disease.

This is why food, clothing and building business are the greatest in existence.

The sheet metal man protects the human being against the elements.

A house or shelter of any kind must have a roof.

Without a roof there can be no shelter.

The sheet metal man has in charge that element of comfort that protects property and preserves health.

You can easily see how important your work is.

It is a responsibility to be proud of, and is worthy of being done well.

Imagination is necessary to art. You must be able to imagine well and constructive in order to succeed as an artist in your line.

There arises another question then, what in Sam Hill is imagination?

Listen friend, imagination is the greatest gift the Almighty has given man.

If it were not for imagination we would all be brutes.

You see the only difference between man and brute is that man can imagine and the brute is governed by instinct.

When you can undertake a certain job to do, and can see the finished job in your mind's eye, and enjoy the pleasure of its perfection before you begin the work—then you are imagining.

All great inventors are great imaginers. They see the thing complete before they begin doing it.

You can plainly see by the above, that a man to be an artist in his work must be a good imaginer.

In using constructive imagination, you create the power of good judgment and thereby make yourself able to judge the work of your men.

When you can judge the work of your men you can supervise their work better and with more intelligence.

This in turn makes you a supervisor instead of merely a boss.

When you have reached this stage you shall become an artist in sheet metal.

Just have a talk with the most successful sheet metal man in your town, and see for yourself.

He will tell you the very same thing I am preaching, and will say that the Artisan is right.

By acting on the advice given above you will become better perfected in your work, this will entitle you to get better prices, and better prices means more profit.

Profit is what you are in business for, but you are not entitled to the greatest profit unless you give the greatest service.

All you have to do is to serve well, and the profit will come along automatically.

Here is the true reason. Service in business is cause and profit is effect.

The law of Nature is—that where there is cause there must be effect.

This is not an individual idea, it is a law of nature, and that is why you cannot beat it.

If you try, it will beat you—and beat you to a frazzle.

Study your business. Learn the best way to do things.

Keep every promise you make.

Be reliable to instill confidence.

Be worthy of the name sheet metal artist, and when you have attained that state you will really enjoy your reward—not until then.

There is a great difference between working because you have to, and working because you love it.

When you work because you have to, your business is your boss, but when you work because you love it, satisfaction and success are your partners and they are SOME partners, I'll say.

After all, this article can be summed up completely in just three words—and these three words are, *know your business*.

It is easier to say know your business than it is to say how to know your business.

This is why a fellow must say a lot to teach a little.

Offers Prompt Service for Radiator Repairs.

Big profits are to be had from the repair of automobile radiators.

No matter how busy the force of a sheet metal shop may be, there is always some way to take on more work and thus earn more money for the owner.

One of the chief reasons why sheet metal shops have not made more determined efforts to get this desirable class of repairs has been due to the difficulty of securing the needed supplies.

This difficulty is now thoroughly overcome by the International Radiator Company, 1507 South Michigan Avenue, Chicago, Illinois.

The company is in a position to furnish material and parts, tools, soldering and testing outfits and other requirements.

The International Radiator Company offers for sale superior radiator cores and parts and all other sheet

metal accessories for the automobile, testing and cleaning tanks, soldering and repair apparatus and tools, which will bring the work up to the level of efficiency obtained in other lines.



Showing Repaired Radiator.

For convenience of sheet metal shops and automobile accessory dealers who are short of the right kind of help to do repair, fender, hood, gasoline tank and other automobile sheet metal work, the International Radiator Company has introduced a special out-of-town department in which the work is done and the goods sent to them for repair reshipped promptly and satisfactorily.

New parts may be ordered with the assurance that there will be no delay in forwarding them.

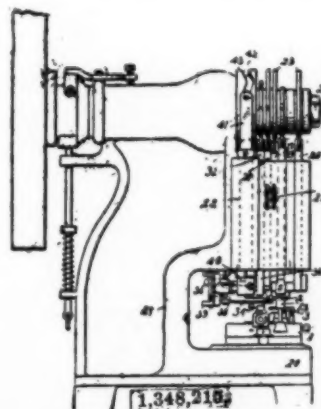
An uncommon feature of the company's equipment is a service department in charge of a well-known expert, E. E. Zideck, author of the book on "The Auto Radiator, Its Construction, Use and Repairs."

Mr. Zideck has also prepared a booklet containing the latest and most valuable data pertaining to the work.

This booklet may be had free of charge by anyone who takes the trouble to write for it to the International Radiator Company, 1507 South Michigan Avenue, Chicago, Illinois.

Obtains Patent for Metal Bending Machine.

Under number 1,348,215, United States patent rights have been granted to Samuel H. Gibson, Cleveland, Ohio, assignor to The Fanner Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio, for a metal bending machine described in the following:



In a machine of the character described and in combination a bed die having a recess formed therein, oppositely disposed movable members normally located above and at the sides of the recess in the bed die, the front faces of said movable members forming continuations of the sides of the recess in the bed

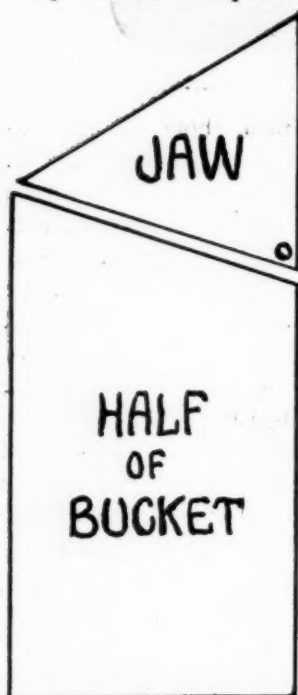
die and serving as parts of said die during the initial

bending of a strip of metal, said movable members being adapted to receive and support a strip of metal to be formed, a forming die mounted above said movable members and adapted to descend to press the strip of metal between said movable members and into the recess in the bed die, means for operating the said movable members to reciprocate them across the recess in the bed die thereby to fold the said strip of metal about the forming die and a heading die mounted above the forming die and adapted to descend and press the metal strip which has been folded about the forming die.

Asks Help in Problem.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

As one of your subscribers, I am asking you to help me out on a piece of work.



I enclose a drawing of the sewer cleaning bucket.

Will you please tell me how to lay this work out.

I can get the bucket all right, but it is impossible for me to get the right shape on the jaws where they close in the center.

The drawing shows one-half of the bucket closed.

I feel sure that among your many readers there is some one who will be kind enough to show me how to work out this problem.

With best regards, I am,
Yours truly,

GUSTAVE ENAKSON.
928 Erie Street, Ham-
mond, Indiana, August 24,
1920.

Defines Unfair Competition.

The following is the official definition of Unfair Competition as announced by the Federal Trade Commission:

1: Advertising special sales of articles so as to convey to the public the impression of an unusual or advantageous offer for a limited period, when in fact the prices during such sales are no different than those obtained at other times.

2: Falsely representing that articles have been purchased in large quantities in order to sell them at less than the regular price.

3: Fraudulently representing or conveying to the public the impression that the advertised price of the article is less than the regular price.

4: Making false and injurious statements to customers concerning the material of which competitive articles are constructed, or the cost of production of the same.

5: Attempting to interest prospective purchasers by conveying a false impression of expert and impartial advice on the best make of an article when in fact the advertiser is directly interested in selling a special make.

NOTES AND QUERIES.

Information Bureau for Our Subscribers.

Combination Soldering Iron and Blow Torch.

From Joseph E. Zang, Johnstown Trust Building, Johnstown, Pennsylvania.

Can you tell me who manufactures a combination soldering iron and blow torch which uses gasoline for fuel?

Ans.—L. B. Allen Company, Incorporated, 4555 North Lincoln Street, Chicago, Illinois.

Peck Williamson Company.

From G. W. Kreider, Hardware, Wenona, Illinois.

Kindly furnish me with the address of the Peck Williamson Company.

Ans.—They have changed their firm name to Williamson Heating Company, and are located in Cincinnati, Ohio.

"Mahoning" Painted Metal Lath.

From John R. Jones, Ames, Iowa.

Will you kindly inform me where I can obtain the "Mahoning" painted metal lath.

Ans.—Sharon Steel Hoop Company, Sharon, Pennsylvania.

Steel Push and Pull Spring.

From C. A. Peck Hardware Company, Berlin, Wisconsin.

We would like to know who makes a push and pull spring from one and one quarter to one and one half inches in diameter, twelve to twenty gauge.

Ans.—William D. Gibson Company, 1802 Clybourn Avenue, Chicago, Illinois.

Sod Cutter.

From McQuesten Hardware Company, 123-125 West Second Street, Muscatine, Iowa.

Can you advise us where we can obtain a sod cutter both hand and also horse power?

Ans.—Osmundson Spade Manufacturing Company, Perry, Iowa; Richmond Sod Cutter Company, Richmond, Indiana.

Plumbing Supply Houses.

From C. E. Ziegler, 226 Susquehanna Avenue, Lock Haven, Pennsylvania.

Will you please tell me the names of several plumbing supply houses?

Ans.—James B. Clow and Sons, Franklin and Harrison Streets, Chicago, Illinois; L. Wolff Manufacturing Company, 601 West Lake Street, Chicago, Illinois; Bridgeport Plumbing Supply Company, 605 Fillmore Avenue, Buffalo, New York; American Plumbing Manufacturing Company, 164 Atlantic Avenue, Brooklyn, New York; Standard Supply and Equipment Company, Altoona, Pennsylvania; Pennsylvania Pottery Company, Westmoreland and Tulip Streets, Philadelphia, Pennsylvania; Meyers Brothers, Charleston, West Virginia; Central Metal and Supply Company, 611 East Lombard, Baltimore, Maryland; Chapman Plumbing Supply Company, 204 West Third Street, S. W., Canton, Ohio; Federal Brass Manufacturing Company, 1000 Champlain Avenue, Cleveland, Ohio; American Plumbers' Supply Company, Toledo, Ohio.

Address Rust Products Company.

From A. A. Wettengel, care of Schlafer Hardware Company, 815 College Avenue, Appleton, Wisconsin.

Please give us the address of the Rust Products Company of America.

Ans.—They are located at 64 East Lake Street, Chicago, Illinois.

Illustrations of New Patents

Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.

1,348,146. Piston-Ring. Edward Beecher, St. Louis, Mo., assignor to McQuay-Norris Manufacturing Company, a Corporation of Missouri. Filed Sept. 3, 1918.

1,348,169. Automobile-Tire Lock. Raymond K. Gray, Chicago, Ill., assignor, by direct and mesne assignments, to The Graynie Corporation, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1919.

1,348,210. Casing for Metal Thermometers and the like. Edward P. Cole, Chicago, Ill. Filed Aug. 2, 1919.

1,348,231. Glass Vessel. George F. McDonnell, Charleston, and John Joseph Dandoy, Dunbar, W. Va. Filed Feb. 13, 1919.

1,348,234. Lock. James C. Mock and Benjamin F. Williston, Detroit, Mich., assignors to John M. Fitzgerald, River Forest, Ill. Filed March 11, 1920.

1,348,366. Wrench. Rudolph Lehnhoff, Burnham, Ill. Filed May 23, 1919.

1,348,337. Lock for Automobiles. Charles G. Trosien, Pontiac, Mich. Filed June 6, 1918.

1,348,416. Jar and Can Lifter. Searborn A. Hilley, Leonard, Tex. Filed Feb. 24, 1920.

1,348,419. Cross-Roller Drill-Bit. Howard R. Hughes, Houston, Tex. Filed Dec. 27, 1919.

1,348,465. Clothespin. Allen Whitlock, Pueblo, Colo. Filed March 1, 1920.

1,348,471. Mower. John Aspinwall, Newburgh, N. Y. Filed Dec. 20, 1919.

1,348,484. Can-Opener. Mae S. Dickson, Hubbard Woods, Ill. Filed Jan. 26, 1920.

1,348,532. Jar-Opener. Oscar Arndt, Detroit, Mich., assignor of one-half to Roman Arndt, Detroit, Mich. Filed March 22, 1919.

1,348,622. Saw-Set. Omer Bisson, Calaway, Minn. Filed May 3, 1919.

1,348,632. Wrench. Horace L. Dickson, Toronto, Ontario, Canada. Filed April 8, 1920.

1,348,694. Wire Cutting and Twisting Tongs. Joseph B. Bradley, Miami, Fla. Filed Dec. 6, 1919.

1,348,715. Gate-Latch. Edwin J. Grending, Colfax, Ill. Filed Jan. 31, 1916.

1,348,740. Chuck. George Reisinger, Rochester, N. Y. Filed March 12, 1919.

1,348,758. Door-Hanger. Bernard Spitzfaden, Brooklyn, N. Y. Filed Feb. 4, 1919.

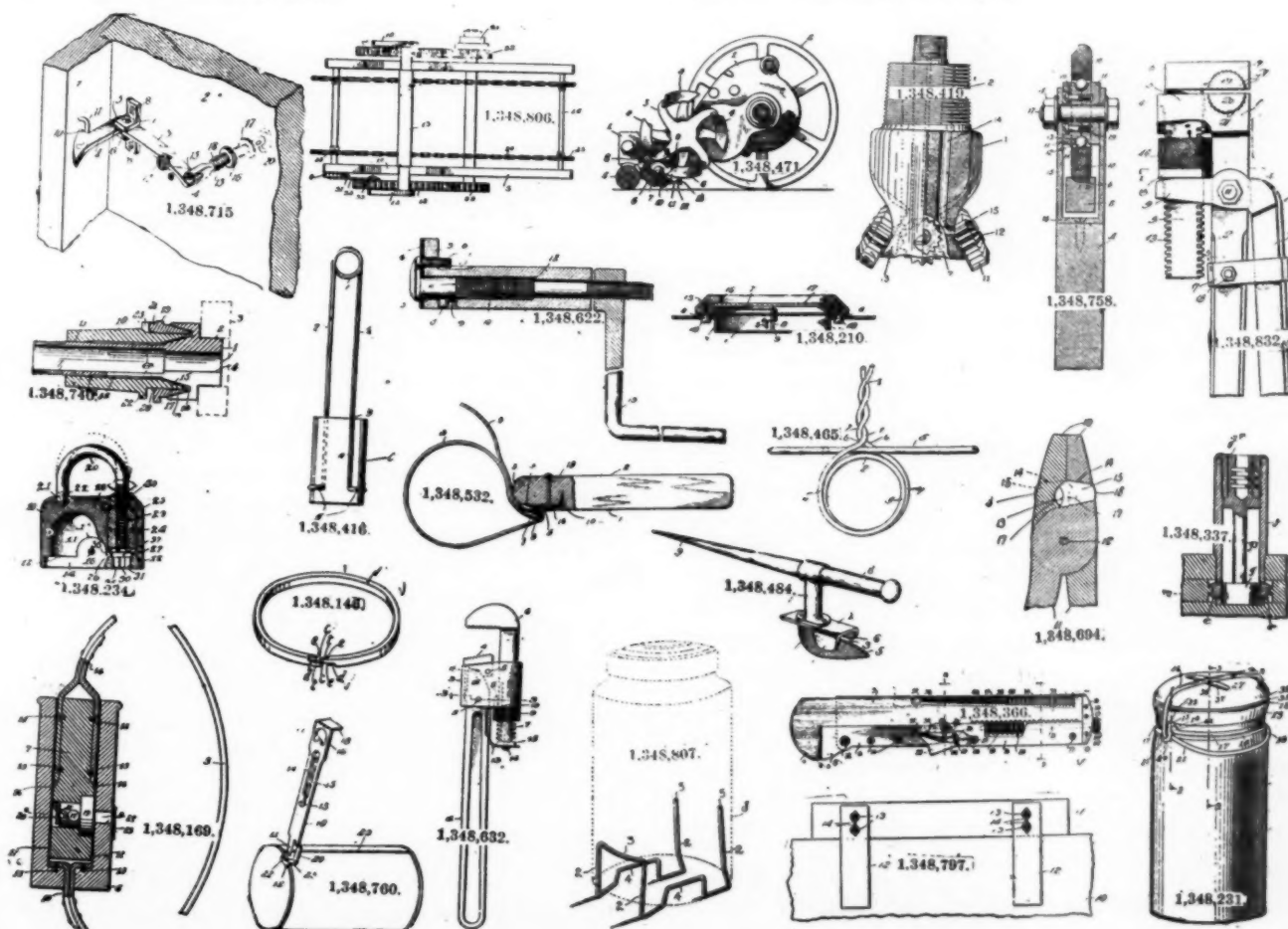
1,348,760. Can-Opener. Richard M. Stewart, Chicago, Ill. Filed Oct. 27, 1919.

1,348,797. Clothes-Wringer Attachment for Wash-tubs. Jacob J. Herb, Toronto, Ontario, Canada. Filed Nov. 5, 1918.

1,348,806. Metal-Bending Machine. Henry Kessen, Coldwater, Ohio. Filed March 11, 1920.

1,348,807. Jar-Rack. John L. Kivlan, Boston, Mass. Filed Jan. 15, 1920.

1,348,832. Wrench. August Magnan, Great Falls, Mont. Filed Aug. 11, 1919.



Weekly Report of the Markets

General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

IMPROVED TRAFFIC CONDITIONS HELP STEEL SITUATION.

The traffic situation seems to be improving in most of the iron and steel districts.

Shipments are reported a little easier, but it is doubtful if the operations at the plants, when taken in the aggregate, are much above 50 per cent of capacity.

This estimate does not include the operations in the Birmingham district, which have been close to normal for some time.

One depressing factor in the iron steel, which has been unduly emphasized, is the curtailing of automobile production some 25 or 30 per cent.

Naturally many steel contracts have been cancelled on this account, but the tonnage thus released has found a ready market in other quarters, notably in the agricultural implement manufacturing industry.

The ultimate effect has been more psychological than real, although the price of sheet bars is easier by some \$2 per ton.

Steel.

Apparently more crude and semi-finished steel has been available for sale in the open market for the last week or ten days which fact is reflected in offerings of 4x4 billets at \$60 Pittsburgh base.

It is understood that for certain specifications, this price could have been shaded.

Open hearth sheet bars have also been in more ample supply with offerings available between \$65 and \$70.

Forging billets have been more readily obtainable between \$70 and \$75, although some interests are asking \$80 for ordinary carbon.

Wire products continue in active demand. The largest interest is still compelled to pro-rate orders but has been able to make larger shipments on contracts recently.

It is understood that The American Sheet & Tin Plate Company was able to ship 170,000 tons of various products last month.

Current business was curtailed somewhat indicating that unfilled obligations were reduced slightly in July and the probability is that there will be a further reduction in unfilled tonnage during the current month.

The advance in freight rates will increase the cost of iron from \$1.50 to \$5 per ton according to the district, length of haul necessary to assemble the raw materials and fuel, size of plant and age of furnace, etc.

Figuring on a 40 per cent rate advance the Valley makers will have an added cost of \$1.50 per ton for basic iron while for Bessemer and foundry grades the cost will be greater as more fuel is required.

Copper.

Some light trading continues in the domestic copper market and the leading producers still quote 19 cents for deliveries through August, September and October while the outside market is shading this quotation some 25 and 50 points.

That consumption is greater at the present time than production and substantiating the forecast of this paper that higher prices are in sight is voiced by Walker of Boston who says it now appears that there was an aggregate of slightly more than 100,000,000 pounds of copper sold in July on foreign and domestic orders.

As near as can be determined about 40 per cent of this was for foreign consumption.

This brings the total sales of copper for the year up to approximately 990,000,000 pounds.

Not all of the copper producers have reported their July production but enough have done so to make a rough estimate of 820,000,000 pounds for the period January 1 to July 31.

Therefore in the face of transportation congestion, strikes in the Connecticut Valley plants and every other untoward influence tending to check domestic and foreign consumption, copper sales have outdistanced production so far this year by about 160,000,000 pounds.

It is not unlikely that the remaining months of the year will double or possibly treble this margin.

If so the technical position of the copper market at the beginning of the new year will be so strong as to compel higher prices for the metal.

According to the Department of Commerce, June exports showed a substantial increase over June 1919, in quantity and value.

Shipments of refined copper in pigs and bars amounted to 51,438,323 pounds at an average price of 19.7 cents, as compared with 24,250,659 pounds, at an average price of 18.1 cents, in June, 1919.

Imports moving in keeping with the general gains on that side were nearly three times as large as in June, 1919, the gain being especially noticeable in copper ore, concentrates, composition and scrap.

Tin.

Not only does midsummer dullness rule in the tin trade, but this year it is exaggerated by the general unsettlement that exists in the business mind regarding the general business outlook and price trends.

Also the declines in prices and losses sustained during past few months have made for great conservatism.

Values on some kinds of tin are down today about $\frac{1}{2}$ cent per pound or more, but it is a dull drifting market and prices are a good deal a matter of negotiation.

Sellers are disposed to meet buyers on moderate quantities for prompt delivery but are more cautious about committing themselves on futures in view of the strength in the Far East.

All deliveries of Straits from spot to the end of the year declined 50 points in the domestic market at the beginning of the week and are now quoted at 46.50.

Spot, August and September deliveries of 99 per cent tin are unchanged at 42.50 but all quotations on deliveries later than September were withdrawn.

At the close of trading last week all positions of shipments from the Straits were quoted at a uniform price of 47 cents with the exception of the November-December position which was 47.25 but this week prices were less firm, the May-June and June-July positions declining a half a cent, the July-August and August-September position 25 points and shipments over the remainder of the year 50 points.

Pig tin declined in the Chicago market from 53 cents a pound to 50½ cents and bar tin from 55 to 52½ cents per pound.

Lead.

The steadily strengthening technical position of the domestic lead market and advancing prices, caused by the curtailment of production below consumption, at last has met its Waterloo in cheap foreign lead, which has been selling in this market, ex steamer for 9 cents.

It is reported that recently substantial tonnages have been booked in England at 8.25, delivered at American North Atlantic ports, duty paid.

As a consequence the outside market dropped its quotation from 9.15 to 9 cents, New York, and from 8.87½ to 8.75, St. Louis, which puts the outside market on a par with the leading interest.

That American buyers have been active in the London market recently was evidenced yesterday by the arrival of some 1,600 tons of lead from that port.

There is no spread in the prices between the leading interest and the outside market at present which remain at 9 cents for New York and 8.75 for St. Louis.

Solder.

Prices of solder in the Chicago market are as follows: Warranted, 50-50, per 100 pounds, \$32.50; Commercial, 45-55, per 100 pounds, \$30.50; and Plumbers', per 100 pounds, \$28.50.

Zinc.

The domestic zinc market remains quiet and prices are prevented from going much higher by foreign stocks which seem to be large at present.

They can not be imported at present prices on account of the duty, but recent shipments from America to foreign countries are likely to be returned at any time. July production amounts to 400,000 tons.

Prices are firm at 8.35, New York, and 8 cents, for St. Louis. St. Louis receipts last week amounted to 81,830 slabs, as against 45,810 for the week before; while receipts so far this year total 2,833,740 slabs, as compared with 3,190,500 for the corresponding period last year.

The strikes and shut downs still persist and one

important producer thus affected, reports that except for a small fraction of normal capacity there is no likelihood of resuming for six or eight weeks.

The stocks on hand at the end of July is understood to have been just below 30,000 tons, or the equivalent to about the normal deliveries for three weeks.

Most of the producers have withdrawn prices entirely or marked them up above the ruling figures, but some are still disposed to meet the market for early positions.

Tin Plate.

Generally speaking, the output of tin plate mills exceeds shipments. Inadequate freight facilities are given as the reason for this state of affairs.

More inquiry for tin plate for the fourth quarter for both domestic and export consumption has developed.

It is reported that some independent mills are taking business for immediate and fourth quarter delivery at \$9.25 a box, as compared with the spread of \$7 to \$8.50 which is being quoted generally, and one maker offering first-quarter business at \$9. A buyer is said to have taken two good sized lots at \$9.

Sheets.

The falling off in the demand for sheets from automobile makers has been followed by some increase in demand from other consumers and as a result prices have been well sustained at the premiums previously current.

Sales of black sheets are understood to have been made between 8 and 8½ cents in the open market and galvanized have developed a little firmer tone at 9 to 9½ cents for early shipment, while blue annealed has sold from 6½ to 7¼ cents.

Operations of independent sheet mills have fallen off somewhat recently and the leading interest has continued to limp along at a relatively low rate because of difficulties in securing regular supplies of steel.

Old Metals.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old steel axles, \$33.50 to \$34.50; old iron axles, \$41.50 to \$42.50; steel spring, \$25.50 to \$26.00; No. 1 wrought iron, \$24.50 to \$25.00; No. 1 cast, \$35.00 to \$35.50; all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 12 cents; light brass, 7½ cents; lead, 6 cents; zinc, 4½ cents; cast aluminum, 20 cents.

Pig Iron.

The one outstanding feature of the iron and steel industry last week was the stiffening of the base pig iron price to a \$50 base which was announced simultaneously from Pittsburgh, Virginia, Eastern Pennsylvania and Buffalo.

In fact the quotation is almost general throughout the trade with the exception of Birmingham where \$42 iron can still be had but it is expected that this price will be advanced to \$45 at any time.

At \$42 this district has a freight rate of \$7.70 to New York which brings the price in the latter city to 30 cents below the \$50 rate.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

The prices and discounts quoted on this and the following pages, are, for the most part, subject to change without notice. Owing to the unsettled condition of the markets and the shortage of materials it is practically impossible for any manufacturer to guarantee his price for any given length of time.

METALS		TIN.		AUGERS.		BEATERS.	
FIG IRON.		Pig tin .....50½c		Boring Machine.....40@40&10%		Carpet. Per doz.	
Southern Fdy. No. 2 46 60		Bar tin .....52½c		Irwin's .....25%		No. 7 Tinned Spring Wire..\$1 10	
Lake Sup. Charcoal.. 57 50-60 50		HARDWARE		Carpenter's Nat.....50%		No. 8 Spring Wire cop-	
Malleable 48 50		ADZES.		Hollow.		pered 1 50	
FIRST QUALITY BRIGHT TIN PLATES.		AWLS.		Bonney's.....per doz. 30 00		No. 9 Preston 1 75	
Per box		Brad.		Post Hole.		Egg. Per doz.	
IC 14x20....112 sheets \$16 80		No. 3 Handled....per doz. \$0 65		Iwan's Post Hole and Well...30%		No. 50 Imp. Dover.....\$1 10	
IX 14x20..... 18 75		No. 1050 Handled " 1 40		Vaughan's, 4 to 9 in.		No. 102 " " Tinned 1 25	
IXX 14x20..... 20 45		Shouldered, assorted 1 to 4,		.....per doz. \$14 00		No. 150 " " hotel.. 2 10	
IXXXX 14x20..... 23 15		Patent asst'd, 1 to 4 " 85		Ship.		No. 10 Heavy hotel tinned 2 10	
IC 20x28..... 33 60		Harness.		Ford's, with or without		No. 13 " " " 3 30	
IX 20x28..... 37 50		Common " 1 05		screw .....Net list		No. 15 " " " 3 60	
IXX 20x28..... 40 90		Patent " 1 00		Brad.		No. 18 " " " 4 50	
IXXXX 20x28..... 43 80		No. 3 Handled....per doz. \$0 65		No. 1050 Handled " 1 40		Hand	
IXXXX 20x28..... 46 30		Shouldered, assorted 1 to 4,		.....per doz. \$14 00		Per doz. \$11 50 13 00 14 75 15 00	
COKE PLATES.		Patent asst'd, 1 to 4 " 85		Moulders'.		12-inch .....Per doz. 20 00	
Cokes, 180 lbs..... 20x28 \$22 35		Harnes.		Call.		BELLS.	
Cokes, 200 lbs..... 20x28 22 70		Common " 1 05		3-inch Nickeled Rotary Bell,		Bronzed base...per doz. \$5 50	
Cokes, 214 lbs.....IC 20x28 23 55		Patent " 1 00		Cow.		Kentucky .....30%	
Cokes, 270 lbs.....IX 20x28 27 40		Peg.		Door.		Per doz.	
BLUE ANNEALED SHEETS.		Shouldered " 1 60		New Departure Automatic \$7 50		Rotary.	
Base .....per 100 lbs. \$7 02		Patented " 75		3 -in. Old Copper Bell... 6 00		3 -in. Old Copper Bell,	
ONE PASS COLD ROLLED BLACK.		Scratch.		fancy 8 00		3 -in. Nickeled Steel Bell 6 00	
No. 18-20.....per 100 lbs. \$7 80		No. 18, socket		3½-in. Nickeled Steel Bell 6 50		Hand.	
No. 22-24.....per 100 lbs. 7 85		handled .....per doz. 2 50		Hand Bell polished. List plus 15%		White Metal..... " 15%	
No. 26.....per 100 lbs. 7 90		No. 344 Goodell-		Nickel Plated..... " 5%		Swiss " 10%	
No. 27.....per 100 lbs. 7 95		Pratt, List, less.....35-40%		Miscellaneous.		Church and School, steel	
No. 28.....per 100 lbs. 8 00		No. 7 Stanley..... " 2 25		alloys .....30%		Farm, lbs...40 50 75 100	
No. 29.....per 100 lbs. 8 10		AXES.		Each ...\$3 00 3 75 5 50 7 25		BEVELS, TEE.	
GALVANIZED.		First Quality, Single		Stanley's rosewood handle, new		List	
No. 16.....per 100 lbs. \$9 75		Bitted, 3 to 4 lb., per doz. 16 50		Stanley iron handle.....Nets		BINDING CLOTH.	
No. 18-20.....per 100 lbs. 9 90		First Quality, Double		Zincd .....55%		Brass .....40%	
No. 22-24.....per 100 lbs. 10 05		Bitted .....per doz. 22 50		Brass, plated .....60%		BITS.	
No. 26.....per 100 lbs. 10 20		Broad.		Auger.		Jennings Pattern.....Net	
No. 27.....per 100 lbs. 10 35		Plumbs, West, Pat.....List		Ford Car.....List plus 5%		Ford's Ship..... " 5%	
No. 28.....per 100 lbs. 10 50		Can. Pat.....\$69 00		Irwin .....35%		Russell Jennings.....plus 20%	
No. 30.....per 100 lbs. 11 00		Firemen's (handled),		Clark's Expansive.....33¼%		Steer's " Small list, \$22 00..5%	
KEYSTONE HAMMERED POLISHED STEEL.		.....per doz. 21 00		Irwin Car .....35%		Ford's Ship Auger pattern	
Discontinued. New product will		Single Bitted (without handles).		Car.....List plus 5%		Center .....10%	
be announced later.		Prices on		Countersink.		No. 18 Wheeler's ..per doz. \$2 25	
BAR SOLDER.		Warren Silver Steel..application		No. 20 " " " 3 00		American Snailhead " 1 75	
Warranted,		Warren Blue Finished " "		" Rose " 2 00		" Flat..... " 1 40	
50-50 .....per 100 lbs. \$32 50		Double Bitted (without handles).		Mahew's Flat..... " 1 60		" Snail.... " 1 00	
Commercial,		Warren's Natl. Blue, 3¼		Dowel.		Russell Jennings.....plus 20%	
45-55 .....per 100 lbs. 30 50		to 4½ lb..Prices on application		Gimlet.		Standard Double Cut Gross \$3 40	
Plumbers' .....per 100 lbs. 28 50		The above prices on axes of 3		Nail Metal Single		Cut .....Gross \$4 00-\$5 00	
ZINC.		to 4 lbs. are the base prices.		Reamer.		Standard Square.....Dox. 2 50	
In slabs .....\$9 00		BAGS, PAPER NAIL.		No. 1 Common..... 40		American Octagon.... " 2 50	
SHEET ZINC.		Pounds.... 10 18 26 35		Screw Driver.		No. 26 Stanley..... 75	
Cask lots .....15c		Per 1,000..\$5 00 6 50 7 50 9 00		Pinch or Wedge Point,			
Less than cask lots...15¼-15½c		BALANCES, SPRING.		per cwt.....\$8 00 to \$9 00			
COPPER.		Sight Spring.....Net		BARS, CROW.			
Copper Sheet, mill base.....29¼c		Straight .....Net		Clothes.			
LEAD.		BASKETS.		Small Willow.....per doz. 15 00			
American Pig\$ 9 65		Medium Willow... " 17 00		Large Willow.... " 20 00			
Bar 10 15		Calvanized 1 bu. 1¼ bu.		Per doz..... \$16 49 \$17 75			
Sheet.		Board and Paper, up to					
Full coils .....per 100 lbs. \$12 50		1/16" .....17c per lb					
Cut coils .....per 100 lbs. 12 75		Thicker .. .....18c per lb					

BLACKING, STOVE. (See Polish)	Well. Oak, Wrought Iron Riveted Top Ears.....per doz. \$8 00	Picture Chains. Light Brass, 3 ft..per doz. \$1 25 Heavy Brass, 3 ft.. " 1 75	Saw Filers. Wentworth's, No. 1, \$12.50; No. 2, \$18.25; No. 3, \$16.25.
BLADES, SAW.	BURRS, RIVETING. Copper Burrs only..25% above list Tinners' Iron Burrs only....30%	Sash Chain. (Morton's) Steel, per 100 ft. 0.....\$2 50 2.....\$3 10 1.....\$3 40	CLAWS, TACK. Wood hdl. No. 10....per doz. \$0 85 Forged steel, wood hdl. " 1 75 Solid steel....." 2 40 Giant " 50
Butchers'. Standard, 1/4 & 1 1/4-in....Nets Clock Spring....." Star	BUTTS. Cast Iron.....7 1/2% Wrought Brass (New List) Plus 5% Wrought Steel, Bright.....40% Wrought Steel, Japanned, .. .....Net Prices	Champion Metal. OR.....5 40 2R.....5 60 1R.....7 75	CLEANERS. Drain. Iwan's Adjustable.....25% Iwan's Stationary.....30%
Hack. Atkins .....5% Star .....Nets	CALIPERS. Double .....Nets Inside and Outside....." Wing	Champion Metal.—Extra Heavy. 1H.....9 50	Pot. Wire .....per doz. \$0 75
Wood. Diston Nos. 6 66 26 .....\$3 00 \$3 50 \$3 00 Atkins Nos. 2 14 18 .....\$3 35 \$4 50 \$4 75	CANES. Logger's Boot. (Lufkin R. Co.'s), per M..\$7 00	Cable Sash Chains. Steel.....List Net Plus 15%	Side-Walk. Steel.....per doz., Net prices
BLOCKS. Wooden .....20% Patent .....20%	CANS. Milk. Elgin. Gals.....5 8 10 Each .....\$4 00 \$5 15 \$5 15 Iowa Patterns. Gals.....5 8 10 Each .....\$4 00 \$5 15 \$5 15	CHALK, CARPENTERS'. Blue .....per gro., \$1 40 Red " 1 40 White " 1 35 Common White School Crayon 25c	CLEAVERS. Family. Beatty's, 7 8 9 10 Inch.... Per doz. \$27 00 29 00 33 00 36 00
BOARDS.	CAN OPENERS. See Openers.	CHIMNEY TOPS. In bags.....per bag \$1 70	CLEAVISES. Malleable .....10c lb.
Stove. Wabash Crystal.....Net Prices Wabash Art Inlay.... " Wabash Embossed.... "	CAPS, GUN. See Ammunition.	CHECKS, DOOR. Corbin.....Net List Russwin.....20%	CLIPPERS. Bolt .....\$2 25& 00
Wash. No. 760, Banner Globe, (single) .....per doz. \$5 25 No. 652, Banner Globe, (single) .....per doz. 6 75 No. 801, Brass King per doz. 8 25 No. 860, Single—Plain Pump 6 25	CARPET STRETCHERS. See Stretchers.	CHECKS, DOOR. Iwan's Volcano.....35%	CLIPS. Axle .....65&5%
BOLTS. Carriage, Machine, etc. Carriage, cut thread, 1/4x6 and sizes smaller and shorter .....30% Carriage, sizes larger and longer than 1/4x6 .....20% Machine, 1/4x4 and sizes smaller and shorter.....35% Machine, sizes larger and longer than 1/4x4.....25% Stove .....50-10% Tire .....40-5%	CARRIERS. Hay. Diamond, Regular...each, Nets Diamond, Sling..... "	CHISELS. Box. Inches.....12 14 Round, per doz....\$5 25 5 75 Flat, per doz.....7 25 8 25	CLOTH. Emery. Star .....New Prices B. & A..... "
Mortise, Door. Gem, iron.....5% Gem, bronze plated.....5%	CARTRIDGES. See Ammunition.	Cold. Good quality, 1/2 in. and larger .....Nets Smaller size, per doz.....Nets	Hardware Wire.— Prices on application Full rolls (100 ft.) application 12 Mesh, galvanized " " 14 " " " " 16 " " " " 18 " " " "
Barrel. Cast .....Nets Wrought " Wrought, bronzed	CASTERS. Standard—Ball Bearing. .....50&10% Bed .....40% Common Plate. Brass Wheel.....15% Iron and porcelain wheels, new list .....50% Philadelphia Plate, new list .....50% Martin's .....40%	Socket, Firmer. Ohio.....Price on Application	Screen Wire. Prices on application 12 mesh, painted, per 100 sq. ft.....
Flush. Wrought "	CATCHERS, GRASS. No. 1608, per doz.....\$12 25 No. 1658, "14 01	Socket, Framing. Ohio.....Price on Application	COLLARS, STOVE PIPE. Lacquered. Inches 5 6 7 Fancy pattern, 80c 85c \$1 15
Spring. Wrought " Wrought, heavy..... "	CEMENT, FURNACE. American Seal, 5 lb. cans, net \$9 45 " " 10 lb. cans, " 90 " " 25 lb. cans, " 1 87 Pecora, 5 lb. cans.....45 " 10 lb. cans.....90 " 25 lb. cans.....1 87	Tanged, Firmer.—Barton's With handles.....Net list	COMPASSES. Carpenters' .....15%
Square. Wrought "	CHAIN AND CHAINS. Breast Chains. With Slide.....5 00 Without Slide.... 4 00 Doublelark ....doz. pairs, \$5 50 With Covert Snaps " 5 80	Choppers, See Cutters, Meat.	COPPER—See Metals. COPPERS—Soldering. Pointed Roofing. 3 lb. and heavier....per lb. 37c 2 lb. " " " 35c 1 1/2 lb. " " " 37c 1 lb. " " " 40c 1 lb. " " " 42c
BORERS. Angular. Miller's Falls.....per doz. \$23 00 Bill borers, No. 51 " 34 00 " 52 " 39 50		CHUCKS, DRILL. Goodell's, for Goodell's Screw Drivers .....List less 35-40% Yankee, for Yankee Screw Drivers .....\$5 00	CORD. Picture. White Wire.....60&5%
Bang. Enterprise Mfg. Co.'s No. 1..10% " No. 2..10%		Adjustable. Martin's .....30% No. 62, Screw.....20%	Sash. Sampson Spot, No. 7, per doz. ....\$24 50 Sampson Spot, No. 7, per doz. ....\$29 40
BOXES. Mail, No. 2 4 10 Per doz....\$18 00 23 00 29 00		Cabinet. Screw .....20%	CORKSCREWS. Walker's .....30% Williamson's Regular.....35&11% Williamson's Forged Worm....40%
Mitre. Stanley's.....Net Prices Stearns, No. 2...per doz. \$48 00		Carpenters'. Steel Bar...List price plus 25%	COTTERS, SPRING. All sizes.....87 1/2%
BRACES. Fray's Genuine Spofford's.....20&10% Fray's No. 08 .....\$7 50 " No. 010 .....8 00		Carriage Makers'. 2 1/2" .....per doz. \$7 00 3" .....14 00 4" .....28 00 12" .....46 00	COUPLINGS, HOSE. Brass .....per doz. \$2 25
BRACKETS. Hay Rack. Wenzelmann's No. 1, per doz. sets.....\$18 00 Wenzelmann's No. 2, per doz. sets.....19 20		Quilt Frame. No. 30 Ball and Socket, 2 1/4" head.....per gross \$13 00 No. 50, Ball and Socket, 3 1/2" head....per gross 14 50	COVERS, WAGON.—See Tents.
Shelf. Wrought Steel.....40%		Hose. Sherman's, brass, 1/2", per doz. ....48c Double, brass, 1/2-in., per doz. ....1 20	CRADLES, GRAIN. Morgan's Grapevine per doz. \$45 00

CRAYONS—See Chalk.		ELBOWS—Conductor Pipe.		Wood Falls.		HANGERS.	
CUTTERS.		Galvanized Steel, Tin and Terne, Round Corrugated.		Frazer's, 15lb \$1.00; 25lb \$1.50 each.		Barn Door.	
Glass.		Size. Doz.		Hub Lightning, 15lb 90c; 25lb \$1.21 each.		U. S. Roller Bearing.....12½%	
Woodward.....40%		2-inch.....50%		Tin Cans.		Matchless.....12½%	
Meat.		3-inch.....50%		Frazer's		Warehouse Tandem, No. 44.....33½%	
Enterprise—Nos. 5 10 12		4-inch.....50%		1½ lb. per doz.....\$1 75		Conductor P.	
Each.....\$2 50 \$4 25 \$3 75		5-inch.....50%		3 lb. per doz.....3 25		Iwan's Perfection.....45%	
Nos. 22 32		6-inch.....50%		GRINDSTONES.		Eave Trough.	
".....6 50 8 50		EMERY, TURKISH.		Family.		All sizes, 5" or smaller.	
Pipe.		Out of market at present time.		Inches.. 7 8 10 12		.....per gross \$3 80 Net	
Saunders, No. 1 2 3		Domestic, lb.....10c		Per doz. 20 50 21 75 26 25 30 50		All sizes, larger than 5".....per gross, 5 00 "	
Each.....\$1 85 2 75 6 75		EYES.		Loose.		Garage Door.	
Slaw and Kraut.		Bright Wire Screw—See Woods, B. W.		Per ton.....Price on application		Right Angle.....50&10%	
4-knife Kraut.....\$20 00-55 00		Drifting Pick.....60, 10 & 5%		Mounted.		Sliding Folding.....50%	
3-knife Kraut,		Hooks and Eyes—		Ball Bearing.. 1 2 3		Receding.....50%	
8x27 in.....13 00-18 00		Brass, 1½" No. 60, per		Each.....\$4 75 5 00 5 25		Parlor Door.	
1-knife Slaw.....2 50		gross.....\$3 50		GUN WADS.		Acme.....per set, \$3 75	
2-knife Slaw.....3 00		Iron, 1½" No. 50, per gross 1 60		(See Ammunition)		Ives' Improved.... " 3 40	
Washer.....11 00		FASTENERS, STORM SASH.		GUNS.		Lane's Standard... " 3 50	
DAMPERS, STOVE PIPE.		Shroeder's.....per doz. \$1 50		Iver Johnson Champion Single		Lane's New Model " 3 10	
Diamond		Sensible....." 3 00		Barrel Shot Guns....Net Prices		Le Roy Noiseless.....40&10%	
All sizes.....40% from New List		FILES AND RASPS.		Double Barrel, Hammer- less....."		Richards.....25%	
DIES AND STOCKS		Delta		HAFTS, AWL.		Advance.....40&10%	
Discount.....New List		Delta.....30%		Brad.		HASPS.	
DIGGERS		Swiss.....List plus 25%		Common.....per doz. \$0 35		Hinge, Wrought, ..Add 50% to list	
Post Hole		Utility....." net.		Peg.		With Staples—See Staples.	
Eureka.....per doz. \$14 50		Nicholson's—		Patent, plain top.. " 80		HATCHETS.	
Iwan's Split Handle (Eu- reka)		American.....5-10%		Patent, leather top " 90		Crescent.....50%	
4-ft. Handle..per doz. 15 00		Arcade.....50-10-7½%		Sewing.		Cast Claw.....per doz. \$1 50@1 35	
7-ft. " ..per doz. 20 00		Black Diamond.....40-10%		Common....." 24		Cast Shingling " 1 50@1 35	
Iwan's Perfection (Atlas)		Eagle.....50-10-7½%		Patent....." 55		Germantown.....7½%	
per doz.....16 50		Great Western.....50-10-7½%		HAY KNIVES.		HAY RACK BRACKETS.	
Iwan's Hercules pattern		Kearney & Foot.....50-10-7½%		See Knives.		Wenzleman's No. 1	
per doz.....18 00		McClellan.....50-10-7½%		HAMMERS, HANDLED.		.....per doz. sets, \$18 00	
See also Augers—Post Hole.		Nicholson brand.....40-10-5%		each, net.		Wenzleman's No. 2	
Dividers, Wing.....25%		J. Barton Smith.....50&2½%		Blacksmiths, Hand, No. 0,		.....per doz. sets, 19 30	
DOOR CHECKS—See Checks		X-F Swiss Pattern....Net List		26 oz.....\$1 35		HINGES.	
DOORS, SCREEN		Simonds'.....50%		Engineers', No. 1, 26 oz.... 1 35		Blind.	
¼-in. 4-panel, painted Net Prices		Disston's.....50%		Farriers', No. 6, 7 oz..... 1 41		Clark's Gravity	
1½-in. 4-panel, painted "		Heller's.....60&10%		Machinists', No. 1, 7 oz.... 1 06		No. 1.....per doz. sets, \$2 25	
1½-in. 3-panel, natural		FIRE POTS.		Nail.		No. 3....." " " 5 75	
pine, fancy....."		Clayton & Lambert's—		Vanadium, No. 41½, 16 oz.,		Gate.	
DOOR HANGERS—See Hangers		each.....\$4 00 @ 6 00		each.....\$2 00		Clark's.....1 2 3	
DRILLS		Gate City.....each, 6 25		V. & B., No. 11½, 16 oz.,		Hgs & Litch, dz. \$5 50 7 00 9 75	
Blacksmiths' Twist. (New		Gem.....each, \$6 75 @ 8 50		each.....1 60		Hinges only " 4 75 5 50 8 00	
List).....40%		FORKS.		Garden City, No. 11½, 16		Latches only. 1 90 1 90	
Breast.		Barley.		oz., each.....1 35		Screen Door.	
Millers Falls No. 12, each \$46 00		Steel, new list.....New Prices		Tinner's Riveting, No. 1, 8		Cast Iron.....gross \$10 00	
" 112, " 26 00		Hay.		oz., each.....1 10		Steel....." 7 00	
Hand.		2-tine.....New prices		Shoe, Steel, No. 1, 13 oz.,		Spring.	
Goodell's Automatic.		3- " ..New prices		each.....1 90		Chicago.....Add 12½% to list	
Nos. 01 03		4- " ..New prices		Tack		Columbia Dbl. Acting.	
Per doz. 12 00 14 40		Digging.....New prices		Magnetic.		.....40&10&5%	
Goodell's Single Gear, per		Scoop.....New prices		No. 5, each.....\$1 00		Gem.....25%	
doz.....15 75		FREEZERS—ICE CREAM		HAMMERS, HEAVY.		Ideal Detachable, per gro. \$11 00	
Goodell-Pratt No. 4½ per		White Mountain 1-quart....@		Under 5 lbs.....50%		Matchless.....40%	
doz. list, less.....30%		" " 2 " ..@		5 lbs. and over.....50&10%		New Idea.....per gro. \$7 20	
Goodell-Pratt No. 379 per		" " 4 " ..@		Masons'.		Oxford.....20%	
doz. list, less.....30%		" " 6 " ..@		Single and Double Face....50%		Wrought Iron.	
Reciprocating.		Arctic.....1 " ..@		HANDLES.		New Lists.....	
Goodell's.....per doz. 26 00		" " 2 " ..@		Auger.		Light Strap Hinges.....5&5%	
DRIVERS, SCREW		" " 4 " ..@		Common Assorted per doz. \$0 75		Heavy Strap Hinges...20&7½%	
Standard.....Nets		" " 6 " ..@		Pratt's Adjustable, Nos.		Light T Hinges...List plus 45%	
Lock Ferrule....."		GAUGES.		1 & 2, per doz.....6 00		Heavy T Hinges...List plus 45%	
Champion....."		Cream Pall.		Ives' Adjustable...per set, 1 35		Extra Heavy T Hinges. 15&5%	
Champion Pattern....."		Fairmount.....per doz. \$3 75		Axe.....30%		Screw Hook and Strap.	
Clark's Interchangeable....."		Marking, Mortise, etc.....		Chisel.		6 to 12 in....per 100 lbs. \$7 75	
Edison....."		.....Nets		Hickory, Tanged, Firmer, As-		14 to 20 in...." 7 50	
Reed's Lightning....."		WIRE.		sorted, 55c; Large, 85c per		22 to 36 in...." 7 25	
Goodell's Spiral....."		Diaston's.....25%		doz.		Screw Hook and Eye.	
Yankee Ratchet....."		GIMLETS.		Hickory, Socket Firmer, As-		½ in.....per doz. pair \$2 50	
Spiral....."		Discount.....35@40%		sorted, 70c; Large size, 80c		¾ in....." 3 50	
EAVES, TROUGH		GLUE.		per doz.		½ in....." 5 00	
50% off Standard List.		Bulk.		Coal Pick.....40%		HOES.	
ELBOWS—Stove Pipe		B Amber.....per lb. 35c		Drifting Pick.....40%		Garden.....Net	
1-piece Corrugated, Uniform		A White....." 40c		File, assorted, 30c; Large, 35c per		Grub.	
Doz.		H. S. Amber....." 32c		doz.		Extra.....New prices	
5-inch.....\$2 25		Liquid.		Hammer.		Hazel.....per doz. New prices	
6-inch.....2 20		Army & Navy.....40%		Adze Eys...per doz. 40c to \$1 00		Ladies' and Boys' ....New prices	
7-inch.....2 60		Le Page's—		Blacksmiths' " 45c@1 00		Mortar.....New prices	
Uniform, Collar Adjustable		List "A".....37½%		Machinists' " 50c@1 00		Planter's Eye.....New prices	
Doz.		List "B".....33½%		Hay and Manure Fork.....25%		Weed.....New prices	
5-inch.....\$2 65		List "C".....25%		Screw Driver.		HOOKS.	
6-inch.....2 70		GREASE, AXLE.		Assorted.....6		Awning, No. 60.....per gro. 50%	
7-inch.....3 00		Wood Boxes.		Large.....9		Belt.	
Frazer's.....per gro. \$13 00		Hub Lightning.....7 50		Shovel and Spade.....25%		Brown's.....70&5%	
Shovel and Spade.....25%						Jones'.....65&5%	
						Bench.	
						See Stops, Bench.	

Box.

Inch..... 5 7 10 12

Per doz. \$2 50 2 75 3 25 3 85

Bush.

Common Axe Handle,

per doz.\$22 00

Chain.

Inch. 1/2 & 5/16 3/4 7/16 1/2

Pr 100 \$7 60-8 10 5 75 11 50 12 60

Clothes Line.

Japannedper doz. 48c@1 40

Galvanized..... " 75c@2 50

Coat and Hat.

Common Wire per gro. 1 25-1 65

Conductor.

Iwan's Tinned Sickle.....List

Corn.

Common, riveted, painted red

Little Giant..... " Nets

Gate.

See Goods, Bright Wire.

Grass.

Common Nos. 1 3 5 7

Per Doz....\$4 50 3 50 3 75 3 25

Hammock.

With plate.....per doz. 1 10

With screw..... " 1 00

Lambrequin, or Drapery,

per gro......50%&.30c

Picture

Potato and Manure.....Nets

Screw.

Brass70%

(See Goods, Bright Wire.)

Seat Spring.....per lb. 5 1/2 c

HOSE, GARDEN.

Per ft.

Guaranteed 3 ply 1/2 inch.....16 c

" 4 ply 1/2 inch.....18 1/2 c

" 5 ply 1/2 inch.....12 1/2 c

COTTON COV. RUBBER HOSE.

High Grade Apache 1" guar.

press. 400 lbs......48c

HUSKERS.

Nos. B E

Per doz.....New Nets

No. 59.....per doz. New Nets

IRON, PIG.

See Metals.—First column.

IRONS.

Curling.

C.....per doz. \$4 40

B..... " 50

A..... " 58

Princess 1 25

Theima 1 25

Pinking " 1 00

Plane.

Wood Bench...Add 10% to list

Sad.

Charcoalper doz. \$11 00

Common, polished, per

100 lbs..... 7 75

No. 70 Asbestos.....\$1 50 net

No. 100 " 1 75 net

Common, nickel plated... 8 25

Mrs. Pott's.....

No. 50 J, Enterprise, per set Nets

No. 55 J, "..... " "

No. 50 T, "..... " "

No. 55 T, "..... " "

Tailors' Sad.....per lb. "

Tailors' Goose.....per lb. "

Ideal.

1 lb. Household\$3 50

9 lb. Dressmakers' 4 25

14 lb. Tailors' Goose..... 5 50

Tuyere.

Single Duck Nest..per doz. \$5 25

Double Duck Nest.. " 6 25

Suttoneach 2 60

JACKS.

Locomotive30%

Wagon.

Richard's No. 1..per doz. \$15 50

Miller 20 00

Oliver

Nos. 0 00

Each\$0 60 \$0 80

Standard, Nos. 1 2

Each\$0 60 \$1 00

R-W

Big Lift......40%

Tiger40%

KETTLES.

Brass15%

Cauldron40&.5%

Copperper lb. 37

Masilin40&.10%

Sugar50%

KNIVES.

Beet Toppling.

Clyde, 9-in. Scimiter Blade,

doz.\$3 85

California 3 40

Butcher,

Per doz.

Beechwood Handles, 6"

blade\$4 00

Beechwood Handles, 7"

blade 4 65

Beechwood Handles, 8"

blade 5 65

Cooper's Hoop......16%

Corn.

Clipperper doz. \$1 75

Dixson's " 2 75

Earle's " 3 00

Woodford " 2 25

Drawing.

StandardList&5%

Adjustable15%

Barton's Carpenters'......16%

Hay.

Iwan's Solid Socket..doz. \$13 00

Heath's " 13 00

Iwan's, Sickle Edge.. " 13 00

Iwan's Imp'd Serrated " 13 00

Hedge.

Challengeper doz. \$8 00

Dixson's " 3 75

Mincing.

Common, Single .. " 60

Common, Double.. " 90

Streeter, 4-blade.. " 1 30

Streeter, 6-blade.. " 2 00

Putty.

Commonper doz. \$0 75@1 50

Lander's ... " 1 75@2 50

Scraping.

Beech Handle..... 90@1 10

Lander's 5 50@6 50

KNOBBS.

Doors.

Mineralper doz. \$1 80

Porcelain " 1 90

Jet " 2 00

LADDERS.

Common Long.

Per ft.17c@23c

Extension.

Per ft.22 to 28

Step.

Common, per ft......23c

Common, with Shelf, add 10c.

IXL34c

Challenge, 6 to 9 ft.....55c

10 to 16 ft......60c

LANTERNS.

Bull's Eye Police.

3-in. Flash Light..per doz. \$13 00

LEADERS, CATTLE.

Nos. 51 52

Per doz.....\$1 35 1 45

LEATHER, LACE.

Rawhide 1/2".....100 ft. \$2 60

1/2" " 4 40

LEATHERS, PUMP.

Valve and Plunger......10%

LIFTERS.

Stove Cover.

Coppered ...per gro. \$3 25@5 50

Alaska " 8 00

Alaska " 10 00

Transom.

Payson's55%

LINES.

Chalk.

Twisted in 20-ft. hanks.

Nos. 4 6 7 8 9

Gro.....Prices on Application

Twisted in 50-ft. balls.

Nos.1 2 3 4

Per doz.....Prices on Application

Braided in 20-ft. hanks.

Nos.0 1 2 3

Per doz.....Prices on Application

Mason's..... " "

50-ft. Jute.....per doz. \$0 95

60-ft. Sisal..... " 40

50-ft. Cotton..... " 15

50-ft. Braided Cot-

ton " 25

LINING, STOVE.

Bricks.....per crate 42c

LOCKS.

Barn Door.

No. 60 Stearns....per doz. \$12 00

No. 80 " 24 00

MACHINES.

Riveting.

Stearns No. 1....per doz. \$16 00

Tenoning.

No. 50 Peace's Spoke, each \$16 00

MAIL BOXES.

See Boxes.

MALLETS.

Carpenters'.

Fibre Head, No. 2 per doz. \$16 50

" No. 3 " 19 50

" No. 4 " 28 50

Round Hickory

.....per doz. \$3 00— 5 00

Round Lig-

numvitae.. " 6 25—10 50

Square Hickory

" 3 50— 5 50

Square Lig-

numvitae.. " 8 00—12 00

Tinners'.

Hickoryper doz. \$2 25

MATS.

Door.

National Rigid.....50&10&5%

Acme Steel Flexible......50%

Stove.

No. 2.....per gro. Nets

No. 1..... " "

No. 1 Asbestos Toasters or

wire-covered Stove Mats,

with handle.....per doz. 1 10

No. 2 Asbestos Toasters,

with ring.....per doz. 60

MATTOCKS.

Plumbs25%

MAULS.

Iron, lbs..... 10 13 16 18

Per doz...Prices on Application

Wood Face, lb..... 10 12 14

Per doz...Prices on Application

Wood Choppers'.

Lake Superior & Oregon

pat.40&.5%

MEASURES.

Galvanized, doz.....Nets

Japanned, doz.....Nets

MILLS, COFFEE.

Enterprise16 2-3%

Parker50&.5%

Arcade40-10%

MITRE BOXES.

See Boxes.

MOPS.

Cotton, Star (Cut Ends).

Pounds 12' 15' 18' 24'-3 oz.

Per doz. \$4 50 5 65 6 75 9 00

MOWERS, LAWN.

Gladiator—B. B.

Inches 16 18 20

Each\$6 50 7 25 8 00

King Universal—B. B.

Each\$5 25 5 75 6 00

Inches 14 16 18

Big Giant.....\$3 50 3 90 4 25

NAILS.

Cut Steel...Prices on Application

Cut Iron.... " " "

Wire.

Small Lots, Prices on Application

Cement Coated.

Small Lots, Prices on Application

Horseshoe.

Ausable55&.5%

Capewell15%

Perfect55&.5%

Putnam20&.5%

Star30&.5%

Picture.

Brass Heads25%

Brads50&.5%

Furniture.....List plus 15%

NAIL PULLERS.

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.

Galvanized before weaving...50%

Galvanized after weaving...40%

NIPPERS.

End Cutting.

Stubb's Pattern, Inches 5 6

Per dozen.....\$4 65 6 75

End and Diagonal Cutting.

Swedish Side, Inches 5 6

Per dozen\$4 60 5 75

Hoof.

Heller's40&.10%

V. & H., No. 52, each.....\$2 25

NOZZLES.

Hose.

Magicper doz. \$9 50

Diamond " 5 75

NUTS, HOT PRESSED.

Square Tapped.

\$1.85 off per 100 lbs.

Hexagon Tapped.

\$1.85 off per 100 lbs.

OILERS.

Chase Pattern.

Brass and Copper......10%

Zinc83&.5%

Engineers'.

Tinper doz. \$7 00@ 9 00

Machine.

Commonper doz. \$0 85

OPENERS.

Box.

See Box Chisels.

Can.

Delmonicoper doz. \$1 30

Never Slip..... " 65

Crate.

V. & B.....per doz. \$7 25-11 00

OUTFIT'S, COBBLING.

Combinationper doz. \$15 00

Economy " 8 50

Family " 14 50

FAILS.

Cream.

14-qt. without gauge,

.....per doz. \$9 50

18-qt. without gauge,

.....per doz. 11 00

20-qt., without gauge,

.....per doz. 11 75

Sap.

10-qt., IC Tin....per doz. \$4 00

12 " " " 5 50

Stock.

Galv'd qts. 14 16 18 20

Per doz..\$9 75 10 75 12 75 14 50

Water.

Galvanized qts. 10 12 14

Per doz.....\$5 75 6 50 7 25

Wood.

Cable, 3-Hoop.....per doz. Nets

Cable, 3-Hoop..... " Nets

Cedar, 3-Hoop, brass " Nets

PANS.

DrippingNet

Fry.

CommonNets

Acme " "

Roasting.

Faxon.

Nos. 1 2 3 4

Per doz.....Nets

Neverburn..... " "

Savory, No. 200...per doz. \$8 40

PAPER.

Building.

Plainper 100 lbs.

Tarred " "

Tarred Felt.. " "

Red Rosin, per ten.....75 00

Sand and Emery.

No. 1, per ream, best grade \$5 40

No. 1, per ream, cheaper

grade 4 85

Wrapping.

Express100 lbs. Nets

Price A

Price B

Price C

Price D

Price A

Price B

Price C

Price D

PARERS.		Fencing.		PUNCHES.		SAWS.	
Apple.		Black Bull .....All Nets		Conductors.		Band.	
Goodell's .....per doz. \$10 80		Farmers' Choice .....All Nets		No. 22 .....per doz. \$3 00		E. C. Atkins & Co.	
Turntable " 11 40		Russell's .....All Nets		Machine .....per lb. 25		Diaston's .....Prices on applic'n	
White Mountain... " 8 40		Flat and Round Nose.		Saddlers'.		Buck.	
Reading, No. 78... " 11 40		Bernard's .....New Prices		Common.....per doz. 1 50 to 5 00		Diaston's .....Prices on applic'n	
Potato.		Lodi .....New Prices		Revolving Spring.		Jackson's .....New nets	
Goodsell's Saratoga, 10 1/4 in., doz..... 6 50		Paragon .....New Prices		Stearns, No. 10...per doz. \$8 00		Butchers'.	
Goodsell's Saratoga, 5 in., doz..... 5 50		Tinners'.		" No. 40... " 16 00		E. C. Atkins & Co.	
PICKS.		Hollow .....Net List		" No. 60... " 19 00		Diaston's .....Prices on applic'n	
Adze Eye Ore.....22 1/4%		PLUMBS AND LEVELS.		PUTTY.		Circular.	
Drifting and Poll Picks.....22 1/4%		Common .....Nets		Strictly pure...per 100 lbs. \$4 25		E. C. Atkins & Co.	
Plumbs, Railroad .....22 1/4%		Cook's .....40%		RAIL.		Diaston's .....Prices on applic'n	
Surface .....22 1/4%		Davis' Iron.....25%		Matchless, 1-in.....5c		Hiles' .....New nets	
PINCERS.		Davis' Inclimeter.....15%		Matchless, 1 1/4-in.....7c		Compass.	
Carpenters', cast steel.		POINTERS, SPOKE.		Barn Door.		E. C. Atkins & Co.	
No. 6 8 10 12		Stearns' No. 1.....per doz. \$10 00		Matchless, 1-in.....5c		Diaston's .....Prices on applic'n	
Each... \$0.63 .80 1.05 1.15		" No. 2..... " 12 00		Storm King .....5c		Hiles' .....New nets	
Blacksmiths' .....45%		POKERS, STOVE.		Sliding Door.		Cross-Cut.	
Hewer's .....40%		Wrt Steel, str't or bent, per doz. \$0 75		Sliding Door.		E. C. Atkins & Co.	
PINS		Nickel Plated, coll han'l's " 1 10		Bronzed wrought iron, .....per ft. 8 1/4c		Diaston's .....Prices on applic'n	
Clothes.		POLISH.		RAKES.		Dehorning.	
Common...per box of 5 gro. \$0 95		Metal.		Per doz.		Diaston's .....Prices on applic'n	
Picket.		Wizard, 6 -oz. per gross \$18 00		Steel, Bow, 12-in. Teeth...\$8 50		Flooring.	
Flutter, 15-in.....per doz. \$1 10		" 1/4-pt. " " 20 40		Steel, Bow, 14-inch " 9 25		E. C. Atkins & Co.	
Fluted, 21-in..... " 1 60		" 1-pt. " " 36 00		Malleable iron, 12-in. " 4 75		Diaston's .....Prices on applic'n	
Spiral " 1 90		" 1-qt. " doz. 6 00		Malleable iron, 14-in. " 5 00		Hack.	
PIPE.		" 1/2-gal. " 10 80		Hay.		Diaston's .....Prices on applic'n	
Conductor.		" 1-gal. " 18 60		Wood, 10 Teeth.....\$4 00		Hand and Rip.	
Plain Round and Round Corrugated.		Stove.		Lawn.		E. C. Atkins & Co.	
29 Gauge .....50%		Black Eagle Paste 5 -oz. \$13 80		20 Teeth .....per doz. \$5 50		Diaston's .....Prices on applic'n	
28 "40%		" " 1/4-lb. 17 40		RASPS—See Files.		Keyhole.	
26 "30%		" " 1-lb. 31 20		RAZORS—SAFETY.		E. C. Atkins & Co.	
24 "List		per case 5 25		Gillette .....per doz. \$45 00		Diaston's .....Prices on applic'n	
Square Corrugated A and B and Octagon.		Black Eagle Liquid, 6-oz. per gross \$15 60		Auto Strip " 45 00		Diaston's No. 7 Prices on applic'n	
29 Gauge .....40%		Black Kid Paste, 5 lbs. per case 6 00		Gem " 8 40		Diaston's Nos. 8, D8, 12, 76, 112, D100, and 120, prices on applic'n	
28 "35%		Black Jack Liquid, 1/2-pt. per gross 15 60		Gem (3 doz lots) " 8 00		Keystone .....New nets	
26 "25%		Black Jack Paste, No. 10, per gross 13 20		Ever Ready " 8 40		Keyhole.	
24 "List		POWDER.		Ever Ready (3 doz lots) " 8 00		E. C. Atkins & Co.	
Galvanized Toncan Metal, Genuine O. H. Iron, Lyonore Metal, Charcoal Iron and Keystone C. B.		See Ammunition.		RAZOR STROPS.		Diaston's .....Prices on applic'n	
Plain Round and Round Corrugated.		PRESSES, FRUIT AND JELLY.		Star (Honing) .....50%		Miter Box.	
28 Gauge.....40%		Enterprise Manufacturing Co. 25%		REGISTERS.		E. C. Atkins & Co.	
26 "30%		PRIMERS.		Cast Iron .....List		Diaston's .....Prices on applic'n	
24 "List		See Ammunition.		Steel and Semi-Steel.....10%		Diaston's .....Prices on applic'n	
Square Corrugated A and B Polygon and Octagon.		PRUNERS.		Solid Brass or Bronze Metal .....prices on application		Panel.	
23 Gauge.....35%		Diaston's Pole...per doz. \$18 60		Baseboard .....10%		E. C. Atkins & Co.	
26 "25%		Water's Improved...per doz. 60%		Adjustable Ceiling Ventilators 10%		Diaston's No. 7 Prices on applic'n	
24 "List		PULLERS.		REGISTER FACES.		Patternmakers'.	
14 and 16-oz. Copper, all designs .....List.		Corik.		Japanned, Bronzed and Plated, 4x6 to 14x14.....10%		E. C. Atkins & Co.	
Portico Elbows.		Daisy .....each, \$2 10		14x14 to 38x42.....25%		Diaston's .....Prices on applic'n	
Galvanized and Terne Steel.		Phoenix " 1 40		REVOLVERS.		Pruning.	
1 -inch .....35%		Quick and Easy " 2 70		Iver Johnson Safety Automatic Hammer .....New Nets		Diaston's .....Prices on applic'n	
1 1/4 -inch .....35%		PRUNERS.		Hammerless " " "		Stairbuilders'.	
1 1/2 -inch .....35%		Diaston's Pole...per doz. \$18 60		L. J. Model 1900. " " "		E. C. Atkins & Co.	
2 -inch .....35%		Water's Improved...per doz. 60%		RINGS AND RINGERS.		Diaston's .....Prices on applic'n	
Tubing .....25%		PULLEYS.		Copper .....2 1/2-in. 3-in. Per doz. \$2 40 \$2 65		Wood.	
Discounts on Round apply on sizes 2-inch to 6-inch inclusive.		Awning—Jap'd .....10%		Rea's Improved Self-Piercing copper, .....doz. 3 40		E. C. Atkins & Co.	
Freight allowed on 15 dozen or more, to all points where freight rate does not exceed \$1.00 per 100 lbs. Less than 15 dozen F. O. B. Factory.		Clothes Line .....10%		Steel, per doz. 1 50 1 80		Diaston's .....Prices on applic'n	
Terms: 30 days net, 2% ten days.		Hay Fork.		Bull.		SAW BUCKS—See Bucks.	
Standard Gauge Conductor Pipe, plain or corrugated.		Iron Wheel, 5-in. per doz. 2 50		Blair's Rings .....per doz. \$ 75		SAW SETS—See Sets.	
Not Nested .....35-5%		Wood Wheel, 6-in. " 2 65		Blair's Ringers..... " 1 00		SAW TOOLS—See Tools.	
Nested solid .....40%		Wood Wheel, 6-in., pass knot..... " 3 00		Brown's Rings..... " 72		SAW FRAMES.	
Stove.		Sash.		Brown's Ringers..... " 1 00		Common, plain...per doz. \$1 50	
Per 100 Joints		Common .....Net		Hill's Ringers..... " 1 00		Common painted.. " 2 10	
29 Gauge, 3-inch.....\$19 00		Common-Sense, 2-in.....Net		Hill's Ring, boxes " 72		SCALES.	
" 4-inch.....19 50		Empire Pattern, 2-in.....Net		Major Rings..... " 60		Pelouze .....40&10%	
" 5-inch.....20 25		Ideal .....Net		Perfect Ringers... " 1 50		Star .....60%	
" 6-inch.....21 00		Steel .....Net		Wolverine Rings... " 1 65		SCOOPS.	
" 7-inch.....23 00		PUMPS.		Wolverine Ringers " 1 10		1/2 bu "Hercules"...per doz. 3 70	
T-Joint Made up.		Pitcher Spout.		Key.		1-bu. "Hercules"... " 5 00	
6-inch .....per 100 \$60 00		Nos. 1 2 3 4		Split, round .....per doz. \$0 17		SCRAPERS.	
Furnace Pipe.		Each .....Nets		Split, square " 32		Triangular, No. 6 per doz. \$6 25	
Double Wall Pipe and Fittings .....20%		Spray.		Ball, round " 40		Road.	
Single Wall Pipe, Round		Midget Junior.....per doz. 3 75		RIVETS.		Cubic ft. 7 5 3	
Pipe Fittings .....20%		New Misty " 6 00		Copper Belt....Add 15% to list		With runners, ea. \$7 00 6 50 6 20	
Galvanized and Black Iron		Crescent " 6 50		Coppered Iron .....30%		SCREEN DOOR HINGES.	
Pipe, Shoes, etc.....15%		PLANES.		Tinners' .....30%		Cast iron .....gross, \$13 00	
PLANES.		Stanley Iron Bench.....net		ROPE.		Steel " 9 50	
PLATES, TIN.		PLANES.		1/4, 5-16 in. Com. on reels, per lb. ....85c		SCREWS.	
See Metals in Column 1.		PLANES.		1/4, 5-16 in. Com. in coils, per lb. ....85c		Bench.	
PLIERS.		PLANES.		Sisal.		Iron, ins. 1 1 1/4 1 1/2	
Giant, Button's—Nets.		PLANES.		1st Qualitytly .....18 1/4c		\$6 82 \$7 87 9 45 16 80	
Cutting.		PLANES.		No. 2 .....17 1/4c		Wood, white maple, per doz. 6 00	
Bernard's .....New Prices		PLANES.		Pure Manila.		Hand—Wood .....50%	
Lodi .....New Prices		PLANES.		1st Quality, base...per lb. 28 1/4c		Hand Rail .....22	
Paragon .....New Prices		PLANES.		Hardware Grade....per lb. 27 1/4c		Jack .....20%	
		PLANES.		RULES.		Lag or Coach—all sizes, gimlet pointed .....45-5%	
		PLANES.		Prices on application		Saw—Centennial.	
		PLANES.		Lufkin's Hickory Board.... " "		Nos. 1 2 3 4	
		PLANES.		Lufkin's Log " "		Per doz .....47c 55c 75c 90c	
		PLANES.		Lufkin's Boxwood " "		Wood.	
		PLANES.		Lufkin's Zigzag " "		F. H. Bright .....70-20%	
		PLANES.				F. H. Blued .....67 1/2-20%	
		PLANES.				R. H. Jap'd .....62 1/2-20%	
		PLANES.				F. H. Brass .....60-20%	
		PLANES.				R. H. Brass .....57 1/2-20%	
		PLANES.				SOYTHES.	
		PLANES.				Clipper, Grass .....per doz. \$13 50	
		PLANES.				Honest Dutchman.. " 13 75	

WARE.

Glue Pots.	
Tinned	Add 15% to list
Enameled	30%
WASH BOARDS—See Boards	
WASHERS.	
Standard O. G. cast iron, per	
lb.	8½c
Wrought steel in 5-lb. boxes,	
per lb.:	
In 3/16 ¼ 5/16 1 ¾	
18c 15c 15c 15c 12c	
11½c 11c 11c 11c	
WEDGES.	
Ax	per doz. Nets
Galling	per lb. Nets
Saw	per lb. 8½
WEANERS.	
Calif.	
Fuller's, per doz..	\$2 00 to \$2 50
Tyler's Safety, per	
doz.	1 85 to 2 40
Carroll's, per doz.	3 00 to 3 75
Hosmer, per doz..	3 50 to 4 60
Shaw Perfected..	3 00 to 3 75
WEIGHTS.	
Hitching	per lb. Nets
Sash—f.o.b. Chicago	
Ton lots, per ton.....	\$73 00
Smaller lots, per ton....	75 00
WHEEL BARROWS.	
No. 4 Tubular Steel.....	@ \$10 25
Common Tray or Stave	
Tray	@ 5 00
Angle leg, garden.....	@ 8 00
WHEELS.	
Carborundum	50%
Emery	60%
Well, Ins.	8 10 12
Per doz.....	\$5 50 7 25 8 50
12-in. heavy hoisting,	
per doz.....	\$25 00
WIRE.	
Brass.	
In coils	Nets
In 1-lb. spools, new list....	Nets
Broom—Tinned	
Nets	
Cable—Same Price as Barbed Wire.	
Copper.	
In coils	Nets
1-lb. spools, new list.....	Nets
Fence—Smooth. An'cal'l Galv'd	
Nos. 6 to 9, less than	
car, per 100 lbs. \$4 25	\$4 95
Hair—New List	
40 & 10%	
Market. Market Quotations	
Bright, full bds.....	"
Bright, broken bds.....	"
Coppered, full bds.....	"
Coppered, broken bds.....	"
Tinned, full bds.....	"
Tinned, broken bds.....	"
Picture—In coils. .80% @ 80 & 10%	
In 5-lb. spools....	per lb. .26c
WRENCHES.	
Coes Steel Handle, 6-inch..	30%
" " " 8- "	30%
" " " 10- "	30%
" " " 12- "	30%
Coes Knife-Handle, 6- "	30%
" " " 8- "	30%
" " " 10- "	30%
" " " 12- "	30%
Coes All Patterns.....	30%
Bemis & Call's:	
Adjustable S, 10%; Adjustable S	
Pipe, 10%; Briggs' Pat-	
tern	25%
Combination Bright.....	10%
Steel Handle Nut.....	25%
Combination Black	25&5%
Merrick Pattern	25&5%
Knife Handle Pattern.	
No. 62, Screw Wrench, List	
plus	5%
No. 60, Steel Handle. ..	115 50
WRINGERS.	
No. 790, Guarantee, per doz.	\$69 00
No. 770, Bicycle....	66 00
No. 110, Domestic. "	59 00
No. 110, Brighton. "	66 00
No. 740, Bicycle....	66 00
No. 22, Domestic. "	54 00
No. 22, Pioneer....	51 00
No. 770B, Bicycle. "	108 00
No. 791B, Guarantee "	115 50

ADVERTISERS' INDEX

ALPHABETICAL LIST

Ajax Bracket and Outlet Co.....	53
American Furnace Co.....	6
American Sheet & Tin Plate Co.....	52
American Steel & Wire Co.....	58
Berger Bros. Co.....	53
Bertsch & Co.....	54
Black Silk Stove Polish Works.....	13
Brier Hill Steel Co.....	52
Bullard & Gormley Co.....	59
Central Pattern Co.....	13
Central Stove & Furnace Repair Co..	13
Clark-Smith Hdw. Co.....	55
Clayton & Lambert Mfg. Co.....	54
Cleveland & Buffalo Transit Co.....	58
Cleveland Castings Pattern Co.....	13
Coes Wrench Co.....	56
Corbin Screw Corporation.....	57
Cortright Metal Roofing Co.....	53
Curtman Mfg. Co., F. L.....	49
Danville Stove & Mfg. Co.....	4
Dieckmann Co., Ferdinand.....	51
Diener Mfg. Co., G. W.....	55
Double Blast Mfg. Co.....	55
Dover Wood Face Co.....	13
Dreis & Krump Mfg. Co.....	54
Farris Furnace Co.....	7
Friedley-Voshardt Co.....	55
Gerock Bros. Mfg. Co.....	53
Hall-Neal Furnace Co.....	5
Mammoth Heating Co.....	4
Harrington & King Perforating Co..	55
Hart & Cooley Co.....	7
Haynes-Langenberg Mfg. Co.....	10
Hemp & Co.....	54
Henry Furnace & Fdy. Co.....	3
Hess-Snyder Co.....	5
Howes Co., The S. M.....	10
Hussey & Co., C. G.....	49
Independent Register & Mfg. Co.....	7
Inland Steel Co.....	50
International Radiator Co.....	53
Kimball Bros. Co.....	49
Knoodler, Frederick J.....	54
Lovell Mfg. Co.....	57
Lufkin Rule Co.....	58
Magge Furnace Co., Inc.....	5
Mahoning Fdy. Co.....	2
Manny Heating & Supply Co.....	11
Meyer Bro. Co., F.....	14
Meyers Mfg. Co., Fred J.....	49
Michigan Safety Furnace Pipe Co.....	9
Milwaukee Corrugating Co.....	60
Monroe Fdy. & Furnace Co.....	6
Nat'l Stove Repair Co.....	13
Niagara Machine & Tool Works.....	54
Nickel Plate Stove Polish Co.....	13
North Bros. Mfg. Co.....	57
Northwestern Stove Repair Co.....	13
Peck, H. E.....	49
Quick Meal Stove Co.....	2-55
Quincy Pattern Co.....	13
Republic Electric Lamp Co.....	58
Richards-Wilcox Mfg. Co.....	56
Rock Island Mfg. Co.....	58
Ross-Gould.....	49
Ryerson & Son, Joseph T.....	52
Safety Interlocking Stove Pipe Co.....	10
St. Louis Technical Institute.....	49
Scheible-Moncrief Heater Co.....	6
Schwab & Sons Co. R. J.....	5
Standard Ventilator Co.....	55
Stanley Rule & Level Plant.....	56
Stearns Register Co.....	8
Sterling Foundry Co.....	54
Sullivan-Gelger Co.....	13
Towner, F. A.....	49
Thomas & Armstrong Co.....	52
Vedder Pattern Works.....	13
Walworth Run Fdy. Co.....	1
Waterloo Register Co.....	11
Whitney Mfg. Co., W. A.....	54
Wise Furnace Co.....	4

CLASSIFIED INDEX

Accessories—Automobiles.	
Curtman Mfg. Co., F. L.,	Maryville, Mo.
International Radiator Co.,	Chicago, Ill.
Richards-Wilcox Mfg. Co.,	Aurora, Ill.
Asbestos Sheets.	
Manny Heating Supply Co.,	Chicago, Ill.
Ball Ties.	
American Steel & Wire Co.,	Chicago, Ill.
Bolts and Nuts.	
Corbin Screw Corporation,	New Britain, Conn.
Ryerson & Son, Jos. T.,	Chicago, Ill.
Brackets	
Ajax Bracket and Outlet Co.,	Cleveland Heights, Ohio
Brakes—Bicycles.	
Corbin Screw Corporation,	New Britain, Conn.
Brakes—Cornice.	
Bertsch & Co.,	Cambridge City, Ind.
Dreis & Krump Mfg. Co.,	Chicago, Ill.
Niagara Machine & Tool Wks.,	Buffalo, N. Y.
Brass and Copper.	
Hussey & Co., C. G.,	Pittsburgh, Pa.
Builders Hardware.	
Bullard & Gormley,	Chicago, Ill.
Ceilings—Metal.	
Friedley-Voshardt Co.,	Chicago, Ill.
Milwaukee Corrugating Co.,	Milwaukee, Wis.
Chain—Furnace.	
Corbin Screw Corporation,	New Britain, Conn.
Chimney—Caps.	
Sterling Foundry Co.,	Sterling, Ill.
Chimney Tops—Revolving.	
Sterling Foundry Co.,	Sterling, Ill.
Cleaners—Hand.	
Nickel Plate Stove Polish Co.,	Chicago, Ill.
Clips—Damper.	
Waterloo Register Co.,	Waterloo, Iowa
Cores—Radiator.	
Curtman Mfg. Co., F. L.,	Maryville, Mo.
International Radiator Co.,	Chicago, Ill.
Cornices.	
Friedley-Voshardt Co.,	Chicago, Ill.
Cribs and Bins.	
Thomas & Armstrong Mfg. Co.,	London, Ohio
Cut-Offs—Rain Water.	
Sullivan-Gelger Co.,	Indianapolis, Ind.
Dampers—Hot Air.	
Howe Co., The S. M.,	Boston, Mass.
Eaves Trough.	
Berger Bros. Co.,	Philadelphia, Pa.
Clark-Smith Hardware Co.,	Peoria, Ill.
Milwaukee Corrugating Co.,	Milwaukee, Wis.
Elbows and Shoes—Conductor.	
Dieckmann Co., Ferdinand,	Cincinnati, Ohio.
Electric Bulbs.	
Republic Electric Lamp Co.,	Moline, Ill.
Elevators.	
Kimball Bros. Co.,	Council Bluffs, Iowa

Enamel—Iron.	
Black Silk Stove Polish Works,	Sterling, Ill.
Nickel Plate Stove Polish Co.,	Chicago, Ill.
Fence Gates.	
American Steel & Wire Co.,	Chicago, Ill.
Fenders.	
Meyers Mfg. Co., Fred J.,	Hamilton, Ohio
Flue Thimbles.	
Sterling Foundry Co.,	Sterling, Ill.
Freezers—Ice Cream.	
North Bros. Mfg. Co.,	Philadelphia, Pa.
Furnace Rings.	
Independent Reg. & Mfg. Co.,	Cleveland, Ohio
Walworth Run Fdy. Co.,	Cleveland, Ohio
Furnaces—Soldering.	
Clayton & Lambert Mfg. Co.,	Detroit, Mich.
Diener Mfg. Co., G. W.,	Chicago, Ill.
Double Blast Mfg. Co.,	North Chicago, Ill.
Quick Meal Stove Co.,	St. Louis, Mo.
Guards—Fire.	
Meyers Mfg. Co., Fred J.,	Hamilton, Ohio
Grindstones.	
Richards-Wilcox Mfg. Co.,	Aurora, Ill.
Hammers.	
Stanley Rule & Level Plant,	New Britain, Conn.
Handles—Boiler.	
Berger Bros. Co.,	Philadelphia, Pa.
Hangers—Door.	
Richards-Wilcox Mfg. Co.,	Aurora, Ill.
Heaters—School Room.	
Hammond Heating Co.,	Cincinnati, Ohio
Haynes-Langenberg Mfg. Co.,	St. Louis, Mo.
Monroe Fdy. & Furnace Co.,	Monroe, Mich.
Heaters—Warm Air.	
American Furnace Co.,	St. Louis, Mo.
Danville Stove & Mfg. Co.,	Danville, Pa.
Farris Furnace Co.,	Springfield, Mass.
Haynes-Langenberg Mfg. Co.,	St. Louis, Mo.
Hall-Neal Furnace Co.,	Indianapolis, Ind.
Hammond Heating Co.,	Cincinnati, Ohio
Henry Furnace & Fdy. Co.,	Cleveland, Ohio
Hess-Snyder Co.,	Massillon, Ohio
Magge Furnace Co.,	Boston, Mass.
Mahoning Fdy. Co.,	Youngstown, Ohio
Manny Heating Supply Co.,	Chicago, Ill.
Meyer Furnace Co.,	Peoria, Ill.
Monroe Fdy. & Furnace Co.,	Monroe, Mich.
Scheible-Moncrief Heater Co.,	Cleveland, Ohio
Schwab & Sons Co., R. J.,	Milwaukee Wis
Waterloo Register Co.,	Waterloo, Iowa
Wise Furnace Co.,	Akron, Ohio
Horse Shoes.	
American Steel & Wire Co.,	Chicago, Ill.
Indoor Closet.	
Independent Reg. & Mfg. Co.,	Cleveland, Ohio
Jobbers—Hardware.	
Bullard & Gormley Co.,	Chicago, Ill.
Clark-Smith Hardware Co.,	Peoria, Ill.

Machines—Crimping.	
Bertsch & Co.,	Cambridge City, Ind.
Niagara Machine & Tool Works,	Buffalo, N. Y.
Machines—Stove Pipe.	
Hemp & Co.,	St. Louis, Mo.
Machines—Tinsmiths'.	
Bertsch & Co.,	Cambridge City, Ind.
Dreis & Krump Mfg. Co.,	Chicago, Ill.
Hemp & Co.,	St. Louis, Mo.
Knoodler, Frederick J.,	Philadelphia, Pa.
Niagara Machine & Tool Works,	Buffalo, N. Y.
Whitney Mfg. Co., W. A.,	Rockford, Ill.
Mailing Lists.	
Ross-Gould,	St. Louis, Mo.
Metals—Perforated.	
Harrington & King Perforating Co.,	Chicago, Ill.
Millboard—Asbestos.	
Jack Corporation, A. W.,	Lockport N. Y.
Miters.	
Friedley-Voshardt Co.,	Chicago, Ill.
Nails—Slatting.	
Hussey & Co., C. G.,	Pittsburgh, Pa.
Nails—Wire.	
American Steel & Wire Co.,	Chicago, Ill.
Ornaments—Sheet Metal.	
Friedley-Voshardt Co.,	Chicago, Ill.
Gerock Bros. Mfg. Co.,	St. Louis, Mo.
Parts—Auto.	
International Radiator Co.,	Chicago, Ill.
Parts—Bicycles	
Corbin Screw Corp.,	New Britain, Conn.
Parts—Tools.	
Corbin Screw Corp.,	New Britain, Conn.
Patterns—Furnace.	
Central Pattern Co.,	Quincy, Ill.
Patterns—Machinery.	
Central Pattern Co.,	Quincy, Ill.
Patterns—Stove.	
Central Pattern Co.,	Quincy, Ill.
Cleveland Castings Pattern Co.,	Cleveland, Ohio
Quincy Pattern Co.,	Quincy, Ill.
Vedder Pattern Wks.,	Troy, N. Y.
Pipe—Conductor.	
Berger Bros. Co.,	Philadelphia, Pa.
Clark-Smith Hdw. Co.,	Peoria, Ill.
Dieckmann Co., Ferdinand,	Cincinnati, Ohio.
Friedley-Voshardt Co.,	Chicago, Ill.
Hussey & Co., C. G.,	Pittsburgh, Pa.
Milwaukee Corrugating Co.,	Milwaukee, Wis.
Pipe and Fittings—Furnace.	
Henry-Miller Foundry Co.,	Cleveland, Ohio
Meyer & Bro. Co., F.,	Peoria, Ill.
Manny Heating Supply Co.,	Chicago, Ill.
Michigan Safety Furnace Pipe Co.,	Detroit, Mich.
Safety Interlocking Stove Pipe Co.,	Mt. Pleasant, Iowa
Stearns Register Co.,	Detroit, Mich.

Pipe and Fittings—Stove.
Hemp & Co., St. Louis, Mo.
Meyer & Bro. Co., F. Peoria, Ill.
Michigan Safety Furnace Pipe Co., Detroit, Mich.
Safety Interlocking Stove Pipe Co., Mt. Pleasant, Iowa
Sullivan-Geiger Co., Indianapolis, Ind.

Plumbs and Levels.
Stanley Rule & Level Plant, New Britain, Conn.

Polish—Metal.
Black Silk Stove Polish Co., Sterling, Ill.
Nickel Plate Stove Polish Co., Chicago, Ill.

Polish—Stoves.
Black Silk Stove Polish Co., Sterling, Ill.
Nickel Plate Stove Polish Co., Chicago, Ill.

Posts—Steel Fence.
American Steel & Wire Co., Chicago, Ill.

Punches.
Bertsch & Co., Cambridge City, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.

Ranges—Combination Gas and Coal.
Quick Meal Stove Co., St. Louis, Mo.

Registers—Warm Air.
Dover Wood Face & Lbr. Co., Dover, Ohio
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Independent Reg. & Mfg. Co., Cleveland, Ohio
Manny Heating Supply Co., Chicago, Ill.
Rock Island Register Co., Rock Island, Ill.
Stearns Register Co., Detroit, Mich.
Walworth Run Fdy. Co., Cleveland, Ohio.
Waterloo Register Co., Waterloo, Iowa

Register Shields.
Hall-Neal Furnace Co., Indianapolis, Ind.

Repairs—Furnace.
Central Stove & Furnace Repair Co., Chicago, Ill.
Nat'l Stove Repair Co., Miamisburg, Ohio
Northwestern Stove Repair Co., Chicago, Ill.

Repairs—Stove.
Central Stove & Furnace Repair Co., Chicago, Ill.
Nat'l Stove Repair Co., Miamisburg, Ohio
Northwestern Stove Repair Co., Chicago, Ill.

Rolls—Forming.
Bertsch & Co., Cambridge City, Ind.
Niagara Machine & Tools Works, Buffalo, N. Y.

Roofing—Iron and Steel.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Brier Hill Steel Co., Youngstown, Ohio
Cortright Metal Roofing Co., Philadelphia, Pa.
Friedley-Voshardt Co., Chicago, Ill.
Inland Steel Co., Chicago, Ill.
Milwaukee Corrugating Co., Milwaukee, Wis.

Rubbish Burners.
Hart & Cooley Co., New Britain, Conn.

Rules.
Lufkin Rule Co., Saginaw, Mich.

Schools—Sheet Metal Pattern Drafting.
St. Louis Technical Institute, St. Louis, Mo.

Screens—Perforated Metal.
Harrington & King Perforating Co., Chicago, Ill.

Screw Drivers.
North Bros. Mfg. Co., Philadelphia, Pa.

Sheets—Black and Galvanized.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Brier Hill Steel Co., Youngstown, Ohio
Inland Steel Co., Chicago, Ill.
Kniedler, Frederick J., Philadelphia, Pa.

Sheets—Blue Annealed.
Brier Hill Steel Co., Youngstown, Ohio

Sifters—Ash.
Diener Mfg. Co., G. W., Chicago, Ill.

Sifters—Flour.
Meyers Mfg. Co., Fred J., Hamilton, Ohio

Smoke Pipe.
Manny Heating Supply Co., Chicago, Ill.

Soldering Fluid.
Townér, F. A., Muskegon, Mich.

Soldering Paste.
Townér, F. A., Muskegon, Mich.

Soldering Furnaces.
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Double Blast Mfg. Co., North Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.

Specialties—Hardware.
Bullard & Gormley, Chicago, Ill.
Corbin Screw Corporation, New Britain, Conn.
Diener Mfg. Co., G. W., Chicago, Ill.
Lufkin Rule Co., Saginaw, Mich.
North Bros. Mfg. Co., Philadelphia, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Rock Island Mfg. Co., Rock Island, Ill.
Stanley Rule & Level Plant, New Britain, Conn.

Specialties—Tin and Sheet Metal.
Curfman Mfg. Co., F. L., Maryville, Mo.

Speedometers—Bicycle.
Corbin Screw Corporation, New Britain, Conn.

Sporting Goods.
Bullard & Gormley, Chicago, Ill.

Statuary.
Friedley-Voshardt Co., Chicago, Ill.
Gerock Bros. Mfg. Co., St. Louis, Mo.

Steel Sheets.
Ryerson & Son, Jos. T., Chicago, Ill.

Stock Tanks
Thomas & Armstrong Mfg. Co., London, Ohio

Stock Waterers.
Rock Island Mfg. Co., Rock Island, Ill.
Sterling Foundry Co., Sterling, Ill.

Stoves—Camp.
Quick Meal Stove Co., St. Louis, Mo.

Stoves—Oil and Gasoline.
Quick Meal Stove Co., St. Louis, Mo.

Stoves and Ranges.
Danville Stove & Mfg. Co., Danville, Pa.
Quick Meal Stove Co., St. Louis, Mo.

Stove Pipe Reducer.
Sullivan Gieger Co., Indianapolis, Ind.

Tacks, Staples, Spikes.
American Steel & Wire Co., Chicago-New York

Tapes.
Lufkin Rule Co., Saginaw, Mich.

Tiles and Shingles—Metal.
Cortright Metal Roofing Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
Thomas & Armstrong Mfg. Co., London, Ohio

Tin—Perforated.
Harrington & King Perforating Co., Chicago, Ill.

Tinplate.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Kniedler, Frederick J., Philadelphia, Pa.

Tools—Auto Repair.
Curfman Mfg. Co., F. L., Maryville, Mo.
International Radiator Co., Chicago, Ill.

Tools—Carpenters'
Lufkin Rule Co., Saginaw, Mich.
North Bros. Mfg. Co., Philadelphia, Pa.
Stanley Rule & Level Plant, New Britain, Conn.

Tools—Sheet Metal.
Bertsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Ryerson & Son, Jos. T., Chicago, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.

Tools—Tinsmiths'
Bertsch & Co., Cambridge City, Ind.
Double Blast Mfg. Co., North Chicago, Ill.
Dreis & Krump Mfg. Co., Chicago, Ill.
Kniedler, Frederick J., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Ryerson & Son, Jos. T., Chicago, Ill.

Torches—Gasolene.
Clayton & Lambert Mfg. Co., Detroit, Mich.
Diener Mfg. Co., G. W., Chicago, Ill.
Double Blast Mfg. Co., North Chicago, Ill.
Quick Meal Stove Co., St. Louis, Mo.

Transit Companies.
Cleveland & Buffalo Transit Co., Cleveland, Ohio

Ventilators.
Berger Bros. Co., Philadelphia, Pa.
Friedley-Voshardt Co., Chicago, Ill.
Standard Ventilator Co., Lewisburg, Pa.
Thomas & Armstrong Mfg. Co., London, Ohio

Ventilators—Ceiling.
Hart & Cooley Co., New Britain, Conn.
Henry Furnace & Fdy. Co., Cleveland, Ohio

Vises.
North Bros. Mfg. Co., Philadelphia, Pa.
Rock Island Mfg. Co., Rock Island, Ill.

Water Outlets
Ajax Bracket and Outlet Co., Cleveland Heights, Ohio

Wire.
American Steel & Wire Co., Chicago, Ill.

Wood Faces.
Dover Wood Face & Lbr. Co., Dover, Ohio

Wrenches.
Coes Wrench Co., Worcester, Mass.

¶ **ADVERTISING** is today the mightiest factor in the business world. It is an evolution of modern industrial competition. It is a business builder, with a potency that goes beyond human desire. It is something more than a "drummer" knocking at the door of the consumer—something more than mere salesmanship-on-paper. It is a positive, creative force in business. It builds factories, skyscrapers and railroads. It makes two blades of grass grow in the business world where only one grew before. It multiplies human wants and intensifies human desires. It furnishes excuse to timorous and hesitating ones for possessing the things which under former conditions they could easily get along without.

¶ Better begin to advertise at once. Every day of waiting is a day wasted.

WANTS AND SALES

For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employees, parties desiring to purchase or sell business, secure partners, or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

BUSINESS CHANCES

For Sale—Three boxes 128 lb. 20x39 furnace coke tin plate 56 sheets, in first class condition. \$17.00 per box. C. A. Hugo and Son, West Point, Nebraska. 7-3t

For Sale—Hardware and implement business. Invoices about \$12,000. Annual business about \$30,000. Located in north central Kansas. Good farm and stock country. Address Box 97, Formosa, Kansas. 7-3t

Lightning Rods—Big profits and quick sales to live dealers selling "DIDDLE'S UNIVERSAL RODS." Our copper tests 99.96% pure. Prices are right—get our agency. L. K. Diddle Company, Marshfield, Wisconsin. V78-12-52t

For Sale—PATENT RIGHTS, either outright or on royalty basis, on good burglar proof lock for garage or stores. Patent number 1,290,612, Serial 197,755. Address J. Luter, 92 West 33rd Street, Bayonne, New Jersey. 8-3t

For Sale—Tin shop, fully equipped. Established 15 years; good paying business. Must be sold at once at sacrifice. It will pay you to investigate. Reason for selling, am retiring. Wahler Brothers, 2553 North Halsted Street, Chicago, Illinois. 9-3t

For Sale—Plumbing, heating and sheet metal business. Only one other shop in town of 1,500. If interested will give a practical man all outside work, furnishing all materials and tools whereby you can average \$40.00 or more weekly. Lock Box 424, Plano, Illinois. 7-3t

Business Chance—By enameler, A-1 in all lines of industry, wishes to communicate with one who desires to build or rebuild enameling plant. Address B-10, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 3-7t

For Sale—An old established hardware business and tin shop in the center of Hyde Park, doing a thriving business. Will sell complete set of tinner's tools separate. Will invoice 80% of present prices. A rare chance if taken at once. Investigate. J. H. Powers, 1411 East Forty-Seventh Street, Chicago, Illinois. 8-3t

For Sale—Several lengths second hand elevator cables as follows: Two lengths ½-6-19 iron wire cables, each 225 ft.; three lengths ½-6-19 iron wire cables, each 215 ft.; ten lengths ¾-6-19 iron wire cables, each 125 ft.; two lengths ¾-6-19 iron wire cables, each 260 ft. Good for logging or lumber camp. Butler Brothers, St. Louis, Missouri. 9-1t

For Sale—Good clean stock of hardware and fixtures. Business established since 1890. Located in Three Rivers, Michigan. Manufacturing town of six thousand population. New million dollar paper mill under construction, insuring future growth of city. Stock and fixtures will invoice \$4,000. Reason for selling, wish to close estate. Reed Hardware Company, Three Rivers, Michigan. 7-3t

For Sale—Tin shop and automobile radiator repair shop, doing a good business in growing central Indiana town. Only shop; 800 population; nearest town county seat. Good country railroad and schools. Small stock carried. \$600 will buy it. Reason for selling, want change of climate. Kindly address B-30, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

BUSINESS CHANCES

For Sale—320 acres land, one mile from good Montana town. Would trade for hardware stock. Lewis Haefner, Baineville, Montana. 9-3t

For Sale—Patent No. 1210006 on Safety Razor. Outright or royalty. Can be made out of a simple wire. Have samples of razor. J. H. Schmitt, 202 Cottonwood Street, Emporia, Kansas. 8-3t

For Sale—On account of age and health I will sell my plumbing and furnace business located in a good town of about 1,300 in eastern Iowa. Good schools and churches. Plenty of work. Address B-24, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

For Sale—Plumbing, heating and sheet metal shop, in a county seat town. State normal schools located here. Population about 4,000. About \$3,500 will take it with building. Last year's business was \$10,000. If interested let me hear from you at once. Address B-23, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

For Sale—One number 12 Royal Charter Oak base burner at \$34.35. One number 14 Royal Charter Oak base burner at \$37.50; made by Charter Oak Stove and Range Company. New goods slightly shop worn. One number 16 Victor Coral base burner, made by Minnesota Stove Company, used one season, absolutely perfect, at \$40.00. Address R. W. Isaacs Hardware Company, Clayton, New Mexico. 8-3t

Business Chance—I must either sell my sheet metal and warm air furnace business or secure some one competent to take entire charge. Splendid opportunity for some one as I am doing the largest business of its kind in this section and a good future is assured. Full details will be given on request. Address B-29, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

For Rent—April 15th, 1921, in St. Paul, Minnesota, a store and warehouse on the best retail street where a retail and wholesale stove and furnace repair business is being carried on and has been very successful for over twenty years. Location known throughout the entire Northwest. An excellent opportunity for man wishing to open an establishment of this kind. For particulars address E. M. & H. F. Ware, St. Paul, Minnesota. 8-2t

HELP WANTED

Wanted—Plumber and fitter. Good wages. W. H. Baker, Sidell, Illinois. 7-3t

Wanted—A number one furnace man. Wages \$1.00 per hour. Address Herman's Tin Shop, Highland Park, Illinois. Phone 555. 6-3t

Wanted at Once—An A-1 combination tinner and plumber. Good wages for the right man. A. L. Spradling, Hoopston, Illinois. 8-3t

Wanted—First-class sheet metal worker, mostly shop work. Steady job for the right man. Write to Ed. Knabe, Rock Falls, Illinois. 8-3t

Wanted—Tinner, light and heavy sheet metal work. Steady work in well equipped factory. Dodge Manufacturing Company, Mishawaka, Indiana. 7-3t

Wanted—Combination plumber and tinner. Steady work with chance for advancement for the right man. Huron Furnace Company, Huron, South Dakota. 7-3t

Wanted—First-class sheet metal and furnace man, in town of 6,000. Well equipped shop. Steady work the year round. Write to Paul Groeschel, Marshall, Missouri. 8-3t

Wanted at Once—Several good sheet metal helpers or young tinner for factory work. All year around at good wages. G. E. Roberts, Fairway Mfg. Company, Sioux City, Iowa. 8-3t

Wanted—Tinner and furnace men. Good working conditions in town of 12,000. Steady employment the year around. Good wages. Address A. E. Packer, New Philadelphia, Ohio. 8-3t

Wanted—A good combination man to do plumbing, heating and furnace work. Prefer man who can estimate jobs. Steady the year around. No lost time. Wages \$45.00 per week. Carl Heinzelman, Midland, Michigan. 7-3t

Wanted at Once—Two first-class sheet metal workers and furnace men. Must be good all around men. \$1.00 per hour and steady work. Union shop. Address Standard Sheet Metal Works, Corner Water and Genesee Street, Waukegan, Illinois. 9-3t

HELP WANTED

Wanted—Two first-class metal workers. General jobbing. \$1.00 per hour. Steady work. Open shop. Brizee Metal Works, Twin Falls, Idaho. 9-2t

Wanted—Tinner for factory and automobile work. Must be good solderer. Steady job for steady man. Address B-26, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

SITUATION WANTED

Situation Wanted—In hardware store. Am capable, reliable and respectable. Steady job only. Geo. A. Hanns, Gothenburg, Nebraska. 7-3t

If you want sheet metal workers get in touch with us. No fee charged. Sheet Metal Workers Free Service Bureau, Room 424, Kasota Building, Minneapolis, Minnesota. 8-5t

Situation Wanted—By enameler who is thoroughly acquainted with the enameling business. Kindly address reply to B-11, care AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 8-7t

Situation Wanted—By first-class tinner and furnace man. Can also do plumbing. Have had 12 years' experience. Nothing but steady position will be considered. When replying give full particulars as to salary, hours, etc. J. H. Dennick, Kennewick, Washington. 9-3t

Situation Wanted—By thoroughly competent and reliable sheet metal worker. Desire position as foreman or general manager of good shop. Small shops and bargain hunters do not answer. If you will pay top wages for 100% efficiency address E. H. Morton, Box 1038, Great Falls, Montana. 9-3t

Situation Wanted—As blow pipe man. Have had 12 years' of thorough experience on road work. Southern part of Texas only. Kindly address B-27, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

Situation Wanted—By first-class sheet metal worker, competent in general lines, cornice, skylight, job work and heating. Am a good pattern cutter and estimator. Would consider buying interest in well equipped concern. Write full details to B-28, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

Situation Wanted—If you require a first-class and thoroughly competent foreman for your sheet metal shop write me and I will furnish you the very best references in the country and let them vouch for my capabilities in all branches of the business. Kindly address B-25, care of AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

Situation Wanted—By tinner and plumber. Am 37 years old, single and have worked at the trade for the past 22 years. I can make any kind of tinware or sheet metal work. Am also an expert on hot air furnace heating. Do any and all kinds of plumbing and hot water heating and main tapping. Can wipe lead joints. Nothing but a steady job the year around considered. Get \$45.00 per week. State wages in first letter. Lee Balie, Parker, South Dakota. 7-3t

TINNERS' TOOLS

For Sale—Tinner's tools. Some good as new. List on application. I. R. Keller, Upper Sandusky, Ohio. 9-3t

Wanted—Complete set of tinner's tools including 8 foot brake, squaring shears, etc. R. A. Strayer, Fayette, Iowa. 9-3t

Wanted—Tinner's scroll shears. Any condition. The Cherry Sign Company, 527 Sherman Avenue, Springfield, Ohio. 7-3t

Wanted—One 30-inch bar folder; one small tuner. Must be in good condition. Hogan and Company, 3168 Archer Avenue, Chicago, Illinois. 7-3t

For Sale—Complete outfit in tinner's tools in good condition. Will make big sacrifice. Newman Hardware and Stove Company, Columbia, Missouri. 7-3t

For Sale—One 30" Triumph exhaust fan, belted, with 6" pulley. Bargain. Will exchange for anything I can use. Joe Lauth, 411 North Mill Street, Pontiac, Illinois. 7-3t

Wanted—To Buy—A set of second hand tinner's tools, including 8 foot brake. Cuddy Plumbing and Heating Company, 634 South Front Street, Mankato, Minnesota. 7-3t